INFORMATION LAW SERIES

THE FUTURE OF THE PUBLIC DOMAIN

Identifying the Commons in Information Law

Lucie Guibault
P. Bernt Hugenholtz (eds.)

KLUWER LAW
INTERNATIONAL

INFORMATION LAW SERIES – 16

THE FUTURE OF THE PUBLIC DOMAIN
Identifying the Commons in Information Law

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The titles in this series are listed at the back of this volume.

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Chapter I

The Future of the Public Domain: An Introduction

P. Bernt Hugenholtz and Lucie Guibault

The presence of a robust public domain is an essential precondition for cultural, social and economic development and for a healthy democratic process. But the public domain is under pressure as a result of the ongoing march towards an information economy. Items of information, which in the 'old' economy had little or no economic value, such as factual data, personal data, genetic information and pure ideas, have acquired independent economic value in the current information age, and consequently become the object of property rights making the information a tradable commodity. This so-called 'commodification of information', although usually discussed in the context of intellectual property law, is occurring in a wide range of legal domains, including the law of contract, privacy law, broadcasting and telecommunications law.

The increasing commodification of information has sparked, particularly in the United States, an intense social debate on the present state and future of the public domain, and has already led to a rich body of scholarly literature,[1] initially as a result of three important academic conferences organized by the University of Haifa in 1999, New York University in 2000 and Duke University in 2001.[2] Understandably, much of these discussions has focused on the apparently unstoppable expansion of intellectual property rights, both in traditional fields (copyright, patent and trademark

1. *See* Nancy Kranich, 'The Information Commons: Selected Bibliography', Revised November 2002, <www.willfulinfringement.com/bibliography.asp>.
2. Proceedings published in: R. Cooper Dreyfuss, D. Leenheer Zimmerman, H. First (eds.), *Expanding the Boundaries of Intellectual Property*, Oxford, Oxford University Press 2001; N. Elkin-Koren and N. Weinstock Netanel (eds.), *The Commodification of Information*, The Hague, London, Boston, Kluwer Law International, 2002, Information Law Series No. 11; and J. Boyle (ed.), 'Duke Conference on the Public Domain', 66 *Law and Contemporary Problems* 1-483 (2003).

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 1–6

law) and in new 'sui generis' domains, such as the special database right introduced by the European legislature in 1996 or the yet-to-be-established protection of 'traditional knowledge'. In this connection, the dangers of information 'enclosure' due to the application of technological protection measures has also been, and still is, widely debated. At a more pragmatic level, these discussions have led to exciting experiments with copyright and contract based alternatives, such as Open Source or 'Creative Commons' licensing, in order to safeguard the public domain.

Other aspects of commodification have thus far received less attention. Ironically, an important cause of commodification of information may lie with the government whose very duty it should be to promote and safeguard a robust public domain. However, largely in response to budgetary restrictions and – often ill-conceived – privatization efforts, especially in Europe many governmental institutions have turned to the commercialization of public information, whereby intellectual property rights and other property claims are exercised as instruments of exclusivity.

Building on the important findings of these prior studies and discussions, this project intends to take a somewhat broader, 'information law' oriented approach towards the question of preserving the public domain, in which a wide range of interrelated legal questions converge. Although the ongoing proliferation of intellectual property rights is undeniably an important 'culprit', it is our hypothesis that there is much more to the problem of preserving the public domain than defining the proper boundaries of intellectual property, i.e. finding that mythical 'delicate balance' between protecting information producers and preserving user freedoms. Fundamental rights and freedoms, such as freedom of expression and information and the right to privacy, obviously, are also important factors in this equation, as are commercial freedoms enshrined in competition law. Other (quasi) property rights, such as rights of 'ordinary' property in tangible goods or movable property, may also play a role as instruments of commodification. Paradoxically, in the right of privacy, being one of the core informational freedoms that might serve as a remedy against overbroad rights of intellectual property, lies a potential instrument of commodification. The right to privacy is at the core of so-called rights of publicity or 'portrait rights', that provide increasingly powerful proprietary protection to pecuniary interests in marketable names and images of public or less than public figures. Privacy rights also underlie proprietary claims of individuals in 'their' body tissues or genetic information.

From a perspective of information law and policy, other – broader – questions should also be posed. Assuming 'commodification' of information is actually occurring in these, and possibly other, legal domains, to what extent is the free flow of information really affected? Isn't a certain commodification inherent in copyright's function to act as 'engine of free expression'? An economist might even argue that commodification is a sine qua non for the growth of markets in information products and services – necessary prerequisites for a healthy information 'environment'.

How and to what extent does the commodification of information affect the free flow of information and the integrity of the public domain? Does the freedom of expression and information, guaranteed *inter alia* in the European Convention on Human Rights, call for active state intervention to 'save' the public domain?

What means – both legal and practical – are available or might be conceived to guarantee and foster a robust public domain? These were the main questions that were addressed in a major collaborative research project led by the Institute for Information Law of the University of Amsterdam (IViR) in cooperation with the Tilburg Institute for Law, Technology and Society (TILT) of Tilburg University, and funded by ITeR, the Dutch National Program for Information Technology and Law. The preliminary papers resulting from the project were discussed during an international symposium held in Amsterdam on July 1-2, 2004. The final results are presented in this book.

Thirteen authors from academia worldwide have contributed a chapter to the present book, each author or pair of authors addressing the future of the public domain from a different angle. In addition, we have invited all authors to reflect upon the notion and role of the public domain in the context of information law and policy. Should this concept be limited to that of a 'negative' image of (intellectual) property protection, i.e. all publicly available information not subject to a property right, and therefore freely (i.e. *gratis*) available,[3] or should a broader approach be taken, e.g. all information available from public sources at affordable cost? Should information policies be aimed at maximizing the public domain or optimizing information flows? To what extent are these aims congruent?

Following this introduction, the three first chapters of this book will deal with the public domain in a 'horizontal' way. First *Samuelson* will map the public domain by providing a schematic overview of the way and the extent to which the public domain is affected by various legal and paralegal influences, particularly in the digital realm. *Salzberger* will then examine the law and economics of the public domain. What does law and economics research teach us about the social utility of having a robust public domain? To what extent do the economics of the digital realm change the parameters underlying the traditional economic rationale of intellectual property? Is the oft-quoted 'tragedy of the commons' really a proper metaphor? Finally, *Birnhack* will discuss the public domain from the perspective of fundamental (human) rights and freedoms. To what extent is the idea(l) of a robust public domain recognized in free speech or possibly elsewhere in human rights or constitutional law? Are some domains more 'public' – more important to preserve – than others? Can fundamental freedoms provide remedies against ongoing commodification?

The next two chapters will look at the public domain through the lens of digital rights management. First *Guibault* will examine the increasing commodification of information by contractual means. The World Wide Web has created an ideal environment for establishing a multitude of contractual relationships between information providers and users. Many web-based contracts will be imposed unilaterally, as

3. Cf. J. Boyle, 'The Second Enclosure Movement and the Construction of the Public Domain', 66 *Law & Contemp. Probs.* 33-74 (2003), p. 58 ff (discussing different meanings of public domain).

standard forms, upon information users not able or even willing to negotiate. Often, such standard forms leave users little freedom to re-utilize the licensed information, either in whole or in part. In a future world totally dominated by contract, what will remain of statutory user freedoms aimed at safeguarding the public domain?

Similar questions can be asked with respect to the use of technical protection measures, which *Koelman* will then address. Technical measures, either as part of digital rights management systems integrating contractual and technical protection, or as 'stand-alone' copy-protection or access-control mechanisms, may serve as potentially powerful means of information 'enclosure'. In remarkable contrast to the history of intellectual property law, where exclusive rights were established to 'commodify' information that could not otherwise be excluded from public use, here actual excludability has led to an additional layer of legal protection. In some jurisdictions, the dangers of information enclosure due to the wide-scale application of technical measures have already been recognized in the law. The European Copyright (or 'Information Society') Directive calls for a complicated obligation on the part of rights owners applying technical measures to allow certain groups of information users to actually benefit from statutory exemptions. The Directive, however, fails to instruct EC Members States as to the methods and means of such facilitation.

The next three chapters will focus on intellectual property law, the legal domain that has been at the heart of most discussions concerning the encroachment of the public domain. *Cohen* will deal with copyright law, *Davison* with database protection law, in particular the European sui generis right that comes dangerously close to a property right in data, and finally *Dreyfuss* and *Dinwoodie* on patent law. Under an ideal system of intellectual property law, rights and freedoms constitute a 'delicate balance' between exclusivity and public domain, in which intellectual property's incentive function, principles of natural justice, the public interest and fundamental freedoms are all reflected. In recent years, due in part to the advance of information technology, this delicate balance has come under pressure. The domain of copyright, which was traditionally limited to the production of cultural goods, has been expanded by embracing (quasi-)technological products, such as industrial design and computer software. Concomitantly, the term of protection was extended, and existing copyright exemptions were curtailed. A new 'database right' was introduced, initially only in Europe, to protect collections of facts left to the public domain by way of copyright's idea/expression dichotomy. The domain of patent law, which originally limited the field of technology, also has undergone a gradual expansion. Here, too, we have seen the advent of computer software, followed later by biotechnological discoveries and, more recently, methods of doing business.

So, undeniably, commodification is occurring in the context of intellectual property law, but is it really harming the free flow of information? Does not a juxtaposition between a 'rights-free' public domain and its antithesis, intellectual property law, blind us from the fact that intellectual property law, as the famous US Copyright Clause will have it ('to promote the progress of science and useful arts'), actually provides powerful incentives for the dissemination of information to the general public, and technological innovation? Many information products

subject to intellectual property rights undergo large-scale commercialization, and are therefore widely available to the general public at low cost. On the other hand, (over)commodification may lead to counterproductive monopolies that stifle the free flow of information and impede further innovation. This may be true especially in areas where intellectual property rights cover 'raw data' or other building blocks of knowledge and creation, as is the case for the new European database right or for certain patents in the field of information technology or biotechnology.

From a perspective of sound information policy, the problem, then, is not simply one of 'saving' the public domain from (further) commodification, by cutting back on intellectual property rights as a matter of principle, but rather of fine-tuning the system in such a way that intellectual property's incentive function remains intact while not unnecessarily impeding further dissemination of information. In sum, commodification in intellectual property law raises many difficult, interrelated questions, some of which might require a rethinking of the rationales of intellectual property laws. How and in what areas does the proliferation of intellectual property rights actually affect the public domain? Is commodification still noticeable in recent legal developments, or has it 'peaked'? Assuming this proliferation has actually reduced the public domain, does it also jeopardize the free flow of information in a broader sense? To what extent, and how is the idea(l) of a public domain already internalized in the legal system (e.g. delineation of subject matter, scope, exceptions, etc.)? What legal measures are available, or might be introduced, to 'save' the public domain?

The next chapters will deal with two instruments of commodification that might be qualified as 'quasi-property rights', and that are conceptually interrelated. *Prins* will deal with data protection and (other) privacy rights that underlie property-like claims in personal data and other privacy-based commodities. The increasing recognition of a general right of privacy, particularly in continental Europe, has led to powerful data protection laws and other substantive rules of privacy protection, such as 'portrait rights' or (broader) rights in personal names and faces. *Wiseman* and *Sherman* will then describe the emergence of a novel right in traditional knowledge and culture ('expression of folklore'), a yet to be fully developed and conceptualized quasi-property right which is the subject of intense debate in various international fora, such as WIPO. Interestingly, here is a form of commodification of information inspired not by economic theory, industry lobbying or commercial necessity, but by notions of natural justice and cultural policies aimed at protecting the cultural heritage and identity of non-western societies besieged and exploited by industrial development. Still, the idea of creating property rights or interests in science and culture that, under prevailing conceptions of intellectual property law, would fall squarely in the public domain, raises searching questions from a perspective of information law and policy.

The notion of the 'public domain' in property law traditionally refers to (immovable) property belonging to the government, to be used for public purposes. This original connotation appears to be almost lost in market-inspired public policies that encourage public agencies to 'enter the marketplace', convert themselves into self-financing 'profit centers' and 'compete' with private enterprise. Privatisation of

government functions or government agencies and public-private partnerships easily lead to withdrawal of public-sector information from the public domain. *Van Eechoud* will describe the process of 'commercialization' of government information, as it is occurring in many countries not governed by the principle, well established in the United States, that such information remain firmly in the public domain. A recently adopted European Directive apparently deals with the risks of commodification of public sector information, albeit in a rather ambiguous and reluctant way.

The final two chapters will examine two self-regulatory initiatives that aim at safeguarding the public domain in a very pragmatic way. *Elkin Koren* will describe and critically assess the Creative Commons project, which was largely inspired by the Open Source Software movement that will first be evaluated by *Schellekens*. Both authors will reflect upon the capability of these and similar 'self-help' measures to serve as remedies against large-scale information enclosure. Is there any hope that the success of open source software will become a meaningful model of information distribution outside the realm of computer programming? If so, should such models be promoted by government and/or regulation, and in what way? What are the hidden dangers of promoting the public domain by using legal instruments based in copyright and contract law? What are the normative effects?

The proceedings of the two-day workshop where preliminary versions of the chapters of this book were discussed, are summarized – by *Melzer* and *Guibault* – at the very end of this book.

Chapter II

Challenges in Mapping the Public Domain

Pamela Samuelson

1. INTRODUCTION

The public domain has been terra incognita for far too long. It has suffered further by sometimes being defined negatively as what is left over when all forms of intellectual property-protected information are taken into account.[1] Such a definition devalues the public domain as a realm of informational resources, making it seem a sad jumble of things that don't deserve to be protected by intellectual property laws or as a netherworld where old information goes to die.[2] The public domain consists, in fact, of a vast and diverse assortment of contents, many of which have social value as public domain materials.[3] In part to counter unclear and negative images of the public domain, I have in previous work proposed a 'map' of the public domain.[4] In this essay, I offer further reasons for mapping the public domain. The essay will also consider various objections that might be raised to this map and will offer refinements of the map to make it more useful for an emerging international conversation about the public domain.

There are three principal reasons for mapping the public domain. A map of the public domain can have positive descriptive value. By depicting diverse aspects of this realm through a map, viewers can perceive public domain contents more distinctly and positively. They can thereby have a more comprehensive view of

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1. *See* E. Samuels, 'The Public Domain in Copyright Law', 41 *J. Cop. Off. Soc'y USA* 137-182 (1993), p. 137.
2. *See*, e.g., J.E. Cohen, 'Copyright, Commodification and Culture: Locating the Public Domain', in this volume (discussing negative images of the public domain).
3. *See*, e.g., J. Litman, 'The Public Domain', 39 *Emory L.J.* 965-1023 (1990).
4. P. Samuelson, 'Mapping the Digital Public Domain: Threats and Opportunities', 66 *Law & Contemp. Probs.* 147-171 (2003) (hereinafter referred to as 'Mapping').

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 7–25

public domain contents and view in relation to intellectual property rights (IPRs). This gives the public domain a more positive character than the absence-of-IPRs conception provides.

Mapping the public domain can also have normative value. Once the diverse contents of the public domain are mapped, it becomes easier to articulate values that various component parts of the public domain serve. Some public domain contents, such as news of the day, for example, are essential to deliberative democracy, while other contents, such as expired patents and copyrights, are chiefly valuable because they enable follow-on creators to compete with and innovate on top of the creative accomplishments formerly protected by these rights.

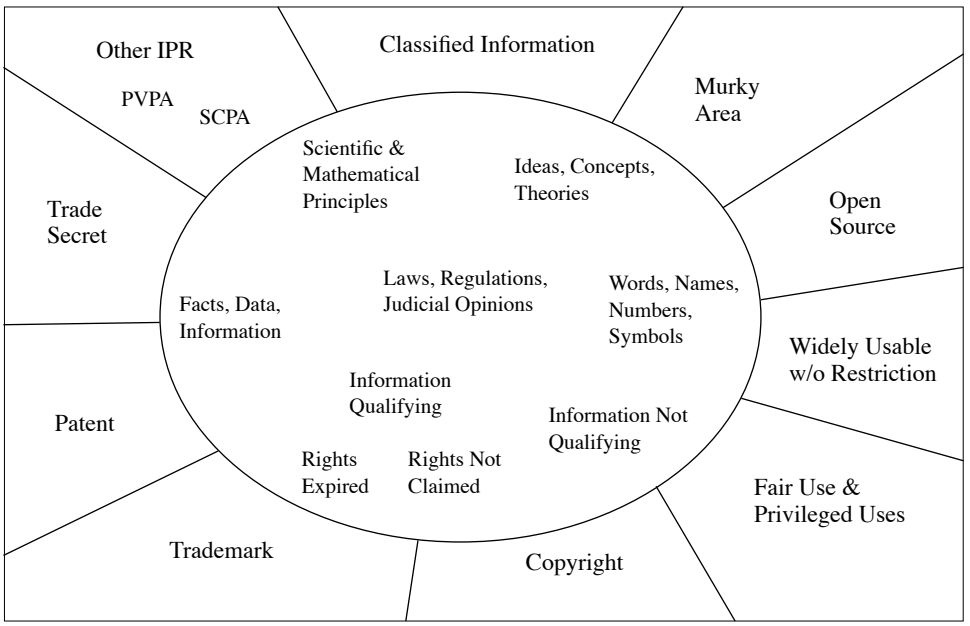
Mapping the public domain may also have some political value. A map may, for instance, aid in the assessment of various threats that legal or policy initiatives pose for the public domain.[5] Initiatives, such as an EU-style database protection regime,[6] necessarily have much greater impact on the public domain than initiatives, such as a proposal to protect original boat hull designs[7] because fact compilations constitute a more substantial and significant portion of the public domain than boat hulls do.[8] Database protection is, as a consequence, more threatening to the public domain than boat hull protection. A map of the public domain and contiguous territories may also be useful for those who advocate that the public domain be preserved as a valued sanctuary for unprotected materials[9] or as an intellectual commons essential for a sustainable information ecology.[10]

Figure 1 reflects my first attempt to map the public domain and contiguous terrain.[11]

---

5. Id. at 154-66 (discussing various legal and policy threats to the public domain).
6. Council Directive 96/9/EC of 11 March 1996 on the Legal Protection of Databases, OJ L 077, 27/03/1996, pp. 20-28 [hereinafter referred to as 'EU Database Directive'].
7. 17 U.S.C. sec. 1301(a)(2), et seq. (*sui generis* form of legal protection for original boat hull designs).
8. Among the articles which assess the public domain in qualitative terms are Michael Birnhack, 'More or Better? Shaping the Public Domain', elsewhere in this volume, Litman, *supra* note 3, and D. Leenheer Zimmerman, 'Is There a Right to Have Something to Say? One View of the Public Domain', 73 *Fordham L. Rev.* 297-374 (2004).
9. D. Lange, 'Recognizing the Public Domain', 44 *Law & Contemp. Probs.* 147-178 (1981).
10. J. Boyle, 'A Politics of Intellectual Property: Environmentalism for the Net', 47 *Duke L.J.* 87-116 (1997).
11. Mapping, *supra* note 4, at 151.

Figure 1: Original Map of Public Domain



2. CONSIDERING CRITICISMS OF THE PUBLIC DOMAIN MAP

The map depicted in Figure 1 may be criticized on several grounds. For one thing, it is US-centric. The public domain as a name for information resources unencumbered by intellectual property rights is not an American, but rather a French, invention.[12] As this volume demonstrates, there is an emerging international conversation about the public domain. To be useful to international intellectual property scholars, a map of the public domain would need to be purged of American and perhaps other national concepts.

However, this raises a second problem: The contents of the public domain vary from nation to nation. An accurate international meta-map of its contents may be difficult or impossible to design.

Third, there is no universally accepted definition of the term 'public domain.' James Boyle asserts that there are many public domains, not just one.[13] Insofar as

12. *See* T.T. Ochoa, 'Origins and Meanings of the Public Domain', 28 *U. Dayton L. Rev.* 215-266 (2002), p. 241.
13. J. Boyle, 'The Second Enclosure Movement and the Construction of the Public Domain', 66 *Law & Contemp. Probs.* 33-74 (2003), p. 62.

this is true, it will be difficult for a conscientious map-maker to take into account these different conceptions of the public domain.

Fourth, the boundaries of the public domain shift over time, as laws and policies affecting its contours change. To be accurate, a map of the public domain will need to be redrawn every time a significant legal change occurs.

Fifth, there are numerous murky areas surrounding the public domain that a conscientious map-maker may find difficult to depict.

Sixth, the term 'map' draws upon real property metaphors that are already too prevalent in intellectual property debates. If the goal is to enrich public policy debates about the public domain, perhaps reinforcing the 'property' metaphor is unwise.

Seventh, the public domain map depicted in Figure 1 arguably distorts the size and centrality of the public domain and contiguous IPRs.

This article will consider these reservations about the map depicted in Figure 1, and then explain why, notwithstanding its limitations, I persist in believing that mapping the public domain is a worthy endeavor and that something akin to Figure 1 is a useful policy tool. If one aspires to preserve the public domain through an international treaty, to take one example, one will need a rich conception of this domain, and a map may be a useful tool in developing consensus about protecting the public domain through a treaty.

US-Centricity: At least three aspects of the map in Figure 1 are US-centric. First, the map shows laws, regulations, and judicial opinions as public domain information resources. This may be accurate as a map of the US public domain,[14] but a number of other counties, including the UK and Canada, allow copyright protection for laws, regulations, and judicial opinions. If a public domain map is to be internationalized, legal information would either have to be eliminated from the map or somehow designated as public domain in some nations, but not in others. Second, the map mentions 'PVPA' and 'SCPA,' acronyms for specific American statutes, in the category of 'Other IPRs.'[15] To internationalize the map, one would need to genericize these designations with terms such as plant variety protection and semiconductor design protection laws. Third, the map depicts a realm for fair and other privileged uses. Fair use is an American statutory limit on the scope of exclusive rights of copyright owners.[16] It would be easy to genericize this part of the map by renaming it as the domain of privileged uses, including those permitted as exceptions and limitations on IPRs.

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14. *See*, e.g., *Veeck v. Southern Bldg. Code Congress Int'l*, 293 F.3d 791 (5th Cir. 2002) (copyright protection is unavailable for laws); M.B. Nimmer & D. Nimmer, *Nimmer On Copyright*, vol. 1, § 5.06 [c] at 5-92 (2000) ('state statutes, no less than federal statutes, are regarded as being in the public domain').
15. PVPA is the name of the American statute entitled the Plant Variety Protection Act, codified at 7 U.S.C. 2321 et seq. SCPA is the name of the Semiconductor Chip Protection Act, codified at 17 U.S.C. sec. 901 et seq.
16. 17 U.S.C. sec. 107. For a useful discussion of American fair use law, *see*, e.g., D. Nimmer, '"Fairest of Them All" and Other Fairy Tales of Fair Use', 66 *Law & Contemp. Probs.* 263 –287 (2003).

Perhaps the 'trade secrets' sector of the map should also be renamed 'confidential or undisclosed information,' since this is a more generic name for this legal concept.[17] 'Classified information' may be another US-centric term, but perhaps it too could be melded into the undisclosed information sector of the map, one 'county' of which could be governmental non-public information and another 'county' could consist of private sector confidential information. With these changes, the US-centricity problem seems resolvable. Figure 2 shows a more internationally appropriate map of the public domain.

National Variations: Figure 2 as an international map of the public domain, its component parts, and contiguous territories may be criticized for representing the public domain at too a high level of generality. This map may convey the false impression that there is more uniformity in public domain contents than is actually the case. 'Information Not Qualifying' may be a ubiquitous category of public domain information resources, but what qualifies for IPRs, and what doesn't, varies from country to country. Laws, as noted above, are public domain information resources in the US, but not in the UK.[18] Original designs of useful articles such as teapots and floor lamps are generally in the public domain in the US because of the 'useful article' limitation on copyright protection for sculptural works.[19] Such designs may, however, be protected by copyright or industrial design laws in other nations.[20] Unoriginal compilations of facts are protected from unauthorized extractions and reuses of their contents under the EU database directive, as long as the maker of the database has made a substantial investment in developing this information resource.[21] However, the same compilations are considered public domain information resources in the US.[22] Business methods and certain biotechnology innovations are patentable in the US.[23] In other countries, such information resources will be, upon public disclosure, in the public domain.[24]

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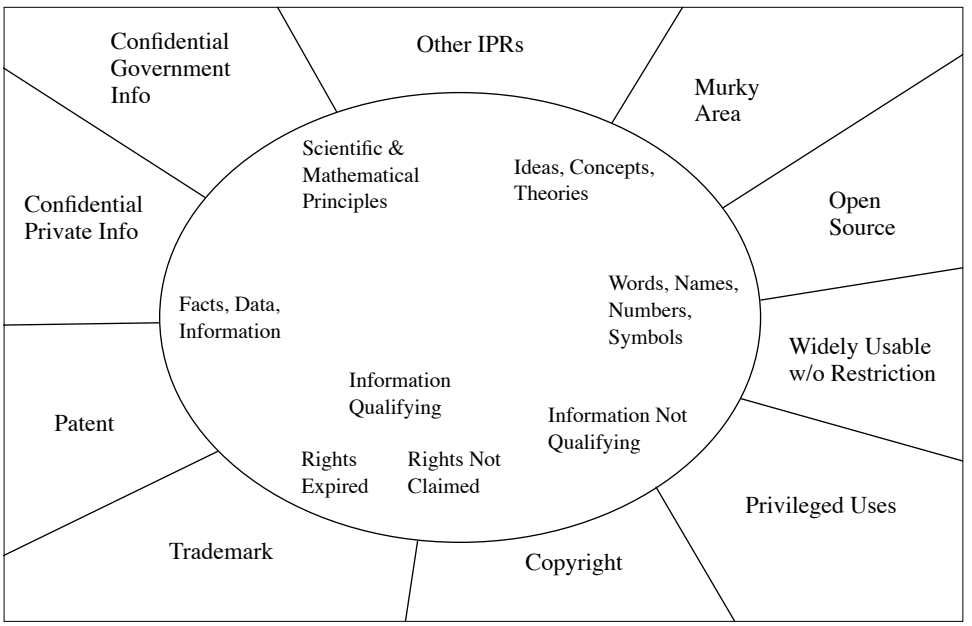
17. Some nations do not have trade secret laws as such, but rather laws that protect confidential business information. The TRIPS Agreement requires member states of the WTO to protect undisclosed information. *See* Agreement on Trade-Related Intellectual Property Rights (TRIPS), sec. 39.
18. *See supra* note 14.
19. *See* 17 U.S.C. sec. 101 (defining 'pictorial, sculptural and graphic works' and 'useful articles'), 102(a).
20. *See*, e.g., J.H. Reichman, 'Design Protection in Domestic and Foreign Copyright Law: From the Berne Revision of 1948 to the Copyright Act of 1976', 32 *Duke L.J.* 1143-1264 (1983).
21. EU Database Directive, *supra* note 6, Art. 7(1).
22. *See*, e.g., *Feist Pub. Inc. v. Rural Telephone Service Co.*, 499 U.S. 340 (1991) (white pages listings of telephone directories do not qualify for copyright protection). Unoriginal data compilations can sometimes be protected in the US by contract, trade secret, or unfair competition law, or by technical measures, such as access controls.
23. *See*, e.g., *State Street Bank & Trust Co. v. Signature Financial Services*, 149 F.3d 1368 (Fed. Cir. 1998) (holding that business methods are patentable subject matter).
24. European Patent Convention Article 52(2)(C), excludes schemes, rules, and methods for performing mental acts, playing games or doing business, and programs for computers. The Canadian Intellectual Property Office similarly proscribes patents on methods of doing business, methods

Figure 2: Public Domain Map (Non-US Centric)



While many other examples could be given of subject matter differences in national intellectual property laws, those given above demonstrate that the public domain has different contents in different jurisdictions. This makes international map-making of the public domain a significant challenge.

One way of dealing with this difficulty is to draft a series of national public domain maps to enable comparative analysis. In the US map, laws would be inside the public domain, for example, and business methods outside, while a UK map would put laws outside the public domain and business methods perhaps inside.

Another approach would be to develop a coding scheme so that differences among nations in the particulars of public domain contents could be highlighted (e.g., green for the EU, blue for the US, red for Japan, and so on) in an international map of public domain contents.

Less susceptible to map-making may be differences in national laws as to procedures or qualitative standards for eligibility for IPRs. If one nation requires innovators to register claims for an intellectual property right in order to qualify for protection, and other countries do not, the public domain is likely to be richer in the registration-requiring country than elsewhere. If one nation requires payment

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of accounting or statistics, personality or IQ tests and the like. Examples of Non-Statutory Subject Matter, Section 16.04, available at: <strategis.ic.gc.ca/sc_mrksv/cipo/patents/mopop/ch16-e.pdf>.

of renewal fees for continued IP protection and another nation does not, innovations are likely to get into the public domain faster in the former than in the latter nation. Nations with stricter novelty rules or higher invention standards may have richer public domains than nations with less strict novelty rules or lower invention standards.[25]

Although procedural or qualitative differences in national laws may be more difficult to depict, a creative map-maker could devise symbols to represent such differences. For example, 'N' and 'R' respectively could indicate notice and registration requirements and arrows of various heights could represent differences in qualitative standards.

That some phenomena are difficult to map (e.g., fish in streams, rivers or oceans in geographic maps or qualitative standards in a public domain map) doesn't mean that maps lack utility as to those phenomena that can be represented. Maps are inevitably selective about what they contain. Indeed, they must be. [26]

Many Public Domains: The most common definition of 'public domain' among intellectual property professionals is information resources—both artifacts and component elements such as ideas and information—that are unencumbered by intellectual property rights.[27] This is, however, not the only definition in the literature. Yochai Benkler, for example, includes fair, otherwise privileged, and unregulated uses in his public domain.[28] Black's Law Dictionary defines the public domain in terms of information artifacts, such as works subject to expired copyrights and patents and works not qualifying for protection, but seemingly omits from the public domain subcomponents such as ideas and information.[29] Other commentators include ideas and information in their public domains.[30] David Lange once conceived of the public domain as a sanctuary or refuge for information resources from which creators

25. *See*, e.g., J.H. Reichman, 'From Free Riders to Fair Followers: Global Competition under the Trips Agreement', 29 *N.Y.U. J. Int'l L. & Pol.* 11-93 (1996) (giving examples of variations in national IP rules).
26. 'Maps are Selective Representations of Reality; They Have to Be.' J. Black, *Maps and Politics,* London, Reaktion Books (1997), p. 11.
27. *See*, e.g., J. Boyle, 'Foreword: The Opposite of Property?', 66 *Law & Contemp. Probs.* 1-31 (2003), p. 30 ('The term public domain is generally used to refer to material that is unprotected by intellectual property rights.')
28. Y. Benkler, 'Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain', 74 *N.Y.U Law Rev.* 354-445 (1999), p. 358. Creative Commons-protected information would probably also fall within Benkler's definition. For an insightful critique of Creative Commons licenses, *see* N. Elkin-Koren, 'Exploring Creative Commons: A Skeptical View of a Worthy Pursuit', elsewhere in this volume.
29. *Black's Law Dictionary*, 8th ed., St-Paul (Minnesota), West Group, 2004. *See also* Boyle, *supra* note 13, at 68; C. Hess & E. Ostrom, 'Ideas, Artifacts, and Facilities: Information as a Common-Pool Resource', 66 *Law & Contemp. Probs.* 111-145 (2003) (distinguishing ideas and information from information artifacts).
30. *See*, e.g., Litman, *supra* note 3; Zimmerman, *supra* note 8.

should be able to draw,[31] but he has more recently reimagined the public domain in non-spatial terms. He now thinks of the public domain as a status arising from the exercise of creative imagination, which confers on creators a presumptive privilege to appropriate from other works to create new ones.[32] This conception resonates with Julie Cohen's view that creators should be able to draw upon the common in culture as part of the cultural landscape within which creative activity takes place.[33] The broadest conception of the public domain is that of Brad Sherman and Leanne Wiseman who define as public domain those informational works that are widely available to the public, some of which may be encumbered by intellectual property rights and some not.[34] Graeme Dinwoodie and Rochelle Dreyfuss seem to have a similarly capacious conception of the public domain when they discuss the zone of accessible information.[35]

Many of these alternative definitions of the public domain can be accommodated by adapting Figure 2. Figure 3 represents the general consensus conception of the contours of the public domain; Figure 4 represents the Black's Law Dictionary conception; Figure 5 represents Lange's conception; Figure 6 represents Benkler's conception; and Figure 7 represents Sherman and Wiseman's conception.

A visualization of multiple conceptions of the public domain is useful because it allows viewers to readily perceive the relative sizes (so to speak) of different conceptions of the public domain. Comparing the figures within, it becomes apparent that Black's public domain is the smallest, and while Benkler's is more extensive than Black's, Sherman and Wiseman have the most expansive conception of the public domain because theirs encompasses all but the undisclosed/confidential information terrain of the map.

Lange's conception of the public domain may initially seem less amenable to being depicted on a public domain map than other conceptions. Yet, Lange is in some sense trying to push back on copyright's borders and shrink its terrain. A map of his conception can accordingly redraw the borders between the copyright and IP-free zones to make copyright realm smaller and the IP-free zone larger. Cohen's conception could be depicted by overlaying on the copyright domain a symbol

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31. D. Lange, 'Reimagining the Public Domain', 66 *Law & Contemp. Probs.* 463-483 (2003), p. 470 (describing his previous work as having imagined the public domain as a 'place of refuge').
32. Id. at 474.
33. Cohen, *supra* note 2, in this volume. I agree with Cohen that in important respects, the public domain is not a wholly separate domain from IPR-protected information resources. Ideas, information, and scientific principles are part of the public domain portion of my map, and yet, they are frequently embodied in copyrighted works (although they need not be). There are certainly pockets of public domain contents in most IP-protected works. Yet to omit depicting ideas and information as core parts of the public domain would have defeated one of the key purposes of the map—to make viewers aware of the range and diversity of public domain information resources.
34. B. Sherman and L. Wiseman, 'Toward an Indigenous Public Domain?', *see* p. 259 in this volume.
35. G.B. Dinwoodie and R. Cooper Dreyfuss, 'Patenting Science: Protecting the Domain of Accessible Knowledge', *see* p. 191 in this volume.

Figure 3: General Consensus Conception of the Public Domain

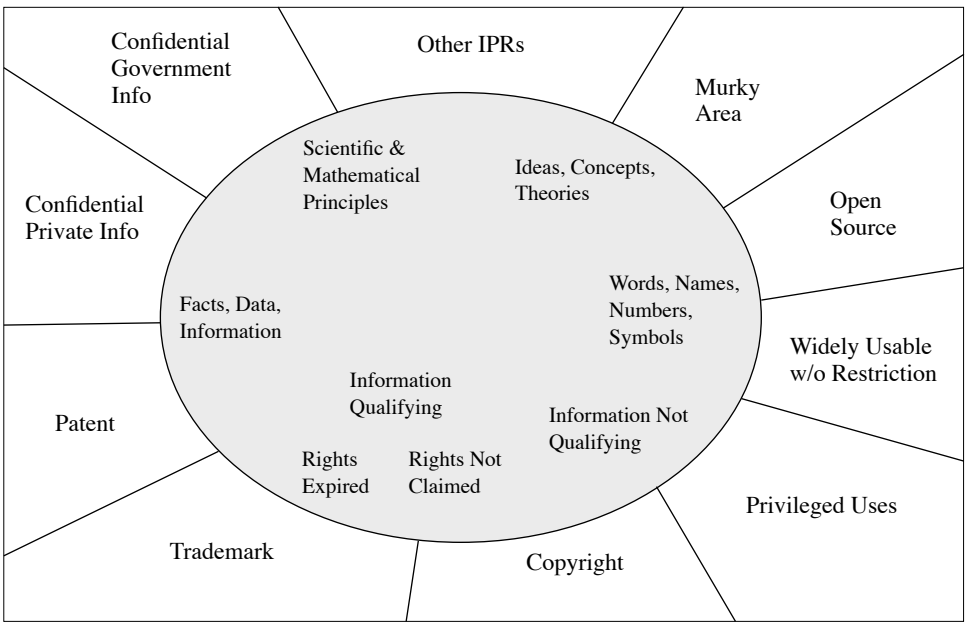


Figure 4: Black's Law Dictionary Conception of the Public Domain

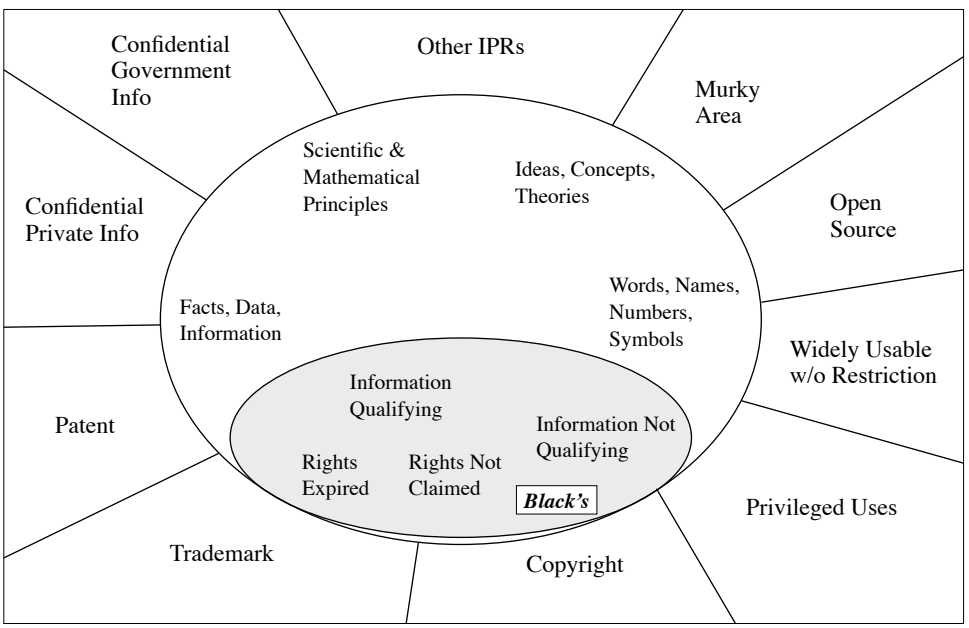


Figure 5: Lange's Conception of the Public Domain

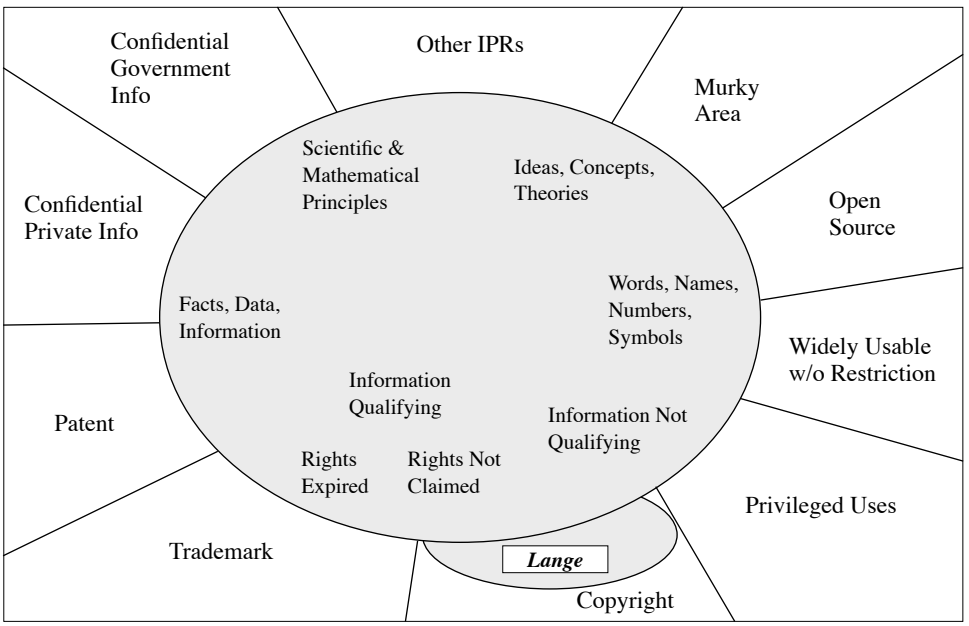


Figure 6: Benkler's Conception of the Public Domain

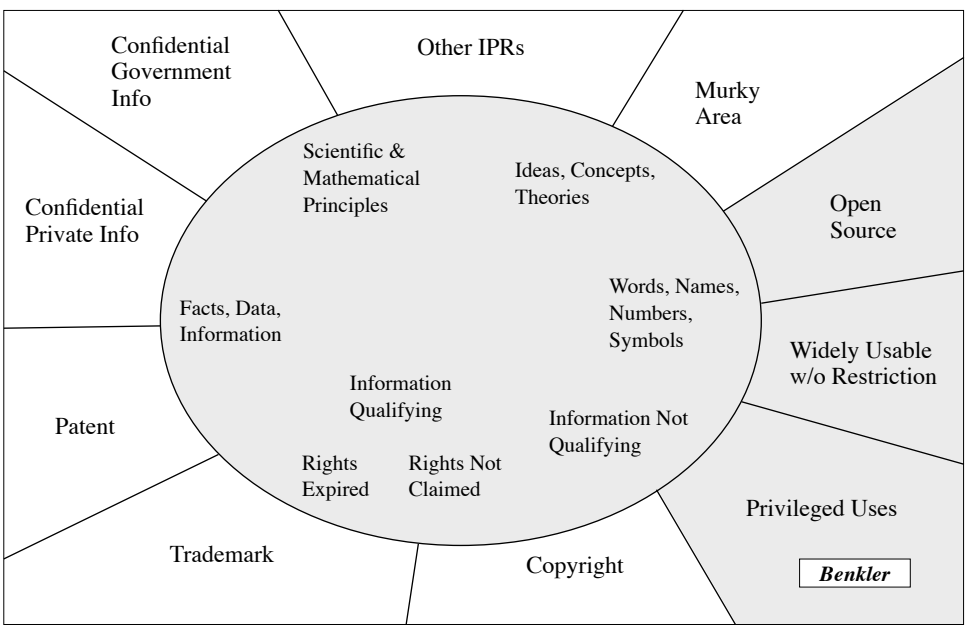
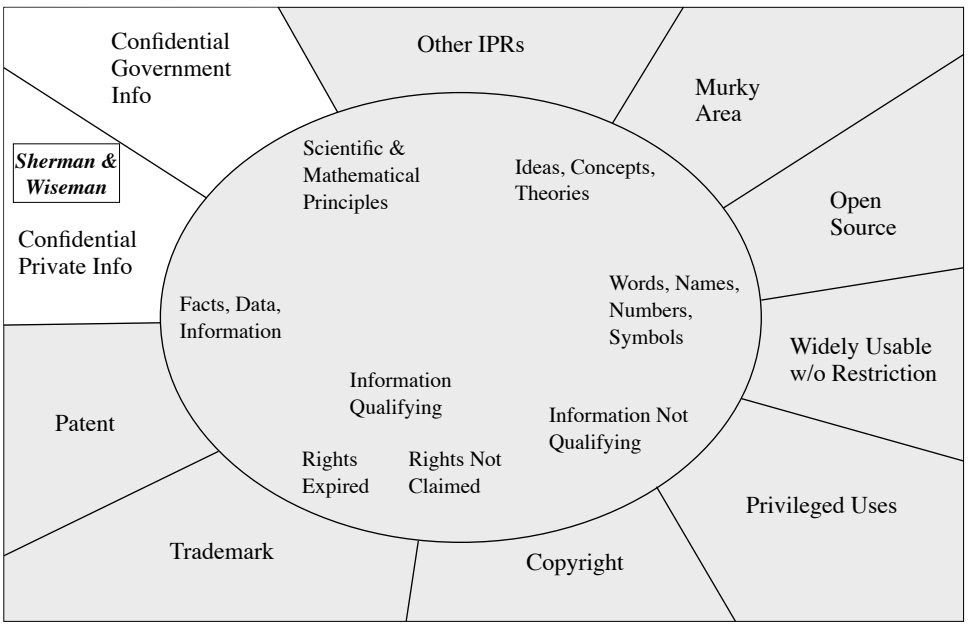


Figure 7: Sherman and Wiseman's Conception of the Public Domain



system to depict public domain elements within copyright law (after all, ideas and information can be found in virtually all copyrighted works).

Shifting Boundaries: As a depiction of the IP-free public domain, Figure 2 may be subject to another criticism: The boundaries of the public domain are likely to shift over time, and so maps of it will inevitably become inaccurate. Sometimes the public domain grows, as it did in the US in the aftermath of court decisions such as *Feist Publications v. Rural Telephone Service*,[36] which held that uncreative compilations of facts cannot be protected by US copyright law. Sometimes it shrinks, as it did when the European Union promulgated a directive requiring protection of the contents of databases[37] or when US courts decided that business methods could be patented.[38] Legislatures can also redraw the bounds of privileged uses, for example, by eliminating some exceptions, making them narrower, or adopting new

36. 499 U.S. 340 (1991).
37. EU Database Directive, *supra* note 6.
38. *State Street Bank & Trust Co. v. Signature Financial Services*, 149 F.3d 1368 (Fed. Cir. 1998).

ones.[39] Courts and legislatures can also alter the contours of IPRs in other ways. If, for example, courts or legislatures decided that open source software licenses were unenforceable, an entire zone of the map would be eliminated.

That boundaries of the public domain shift over time is not surprising. Phenomena depicted in maps often change, and as the phenomena change, the maps must be changed accordingly.[40] The demise of the Union of Soviet Socialist Republics meant many maps became out of date overnight, and new maps had to be drawn to make room for Uzbekistan and Tajikistan. Maps also have to be changed when borders shift in response to wars and other modes of dispute settlement.[41] A major earthquake or volcanic eruption can wipe out a town or alter a mountain top, which will make old maps obsolete. The shifting boundaries of the public domain are accordingly not a serious obstacle to a mapping of it and contiguous IP terrains. It just means that maps of the public domain, like other maps, will have to be updated from time to time.

Murky Areas: The maps depicted in Figures 1 and 2 include a zone designated as 'murky areas,' by which I mean categories of information resources that aren't clearly public domain or IPR-protected. One can question whether such a zone should be included in a map of the public domain and contiguous areas, but after further reflection, I have retained the murky area because it is a useful way to depict several categories of information resources that are not clearly IP-protected or public domain.

The public domain or IP status of a work may, for example, be deeply contested or otherwise unclear. Someone may claim copyright in a compilation of information, but a later user may challenge whether the compilation satisfies copyright's originality standard. Until such a dispute is judicially resolved, that compilation will be in a murky area. A patent may have issued on a chemical process, but prior art not disclosed to the patent examiner may call into question the validity of this patent. Trade dress may have acquired sufficient distinctiveness to serve as a source identifier, but a competitor may claim the design is too functional to qualify as protectable trade dress.

Some information resource may be in the public domain from one perspective, but not from another. Expiration of the term of a design patent or an industrial design, for instance, may mean that the design is in the public domain as a matter of patent or industrial design law, but the same design may still be subject to

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39. 17 U.S.C. secs. 120, 121 (examples of recent exceptions and limitations in US law). Changes to copyright exceptions in national laws were required by the European Parliament and Council Directive 2001/29/EC of 22 May 2001 on the harmonization of certain aspects of copyright and related rights in the information society, OJ L 167, art 5. *See* P.B. Hugenholtz, 'Why the Copyright Directive is Unimportant, and Possibly Invalid', 21 *Eur. Intell. Prop. Rev.* 501 (2000) (critical of the Directive for not harmonizing exceptions and limitations).
40. *See* M.S. Monmoiner, *How to Lie With Maps*, Chicago, University of Chicago Press, 1991, p. 54 ('maps are like milk; their information is perishable and it is wise to check the date').
41. *See* Black, *supra* note 26, Chapters 5 and 6 (discussing frontier disputes and wars as aspects of political cartography).

copyright protection.[42] An information resource may also be in the public domain as to the general public, but not as to a person or firm that agreed to pay royalties for producing it prior to public disclosure of the design.[43]

Information artifacts may also be in the public domain, at least from the standpoint of intellectual property law, and yet subject to technical protection measures, such as access controls, or contractual restrictions that limit uses that can be made of them, regardless of their official public domain status.[44] Whether technical or contractual measures should be enforceable as a matter of public policy and reinforceable through anti-circumvention regulations remains hotly contested and murky.[45]

Also murky is whether works that have been in the public domain for decades can be subjected to intellectual property rights, such as the copyrights 'restored' by the US Congress in 1994 as to works of non-US authors published without US-required copyright notices.[46] A constitutional challenge to the restoration of these copyrights is working its way through the courts in the US.[47] Until this challenge is resolved, the restored copyrights are, for purposes of my map, in a murky area.

Real Property Metaphors: Even without being mapped, the public domain evokes real property metaphors. The initial American usage of the term 'public domain' referred to as yet unsettled lands in the Western US.[48] During the 19th century, publicly accessible information resources unencumbered by intellectual property rights were generally said to be 'common property' and 'public property.'[49] Not until the early 20th century did 'public domain' become a new, and then the predominant, moniker for IP-free information resources.[50]

From the standpoint of public domain advocates or preservationists, 'common property' and 'public property' have an advantage over 'public domain' as a term for IP-free information resources in that the former terms suggest that the community

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42. *See*, e.g., *In re Yardley*, 493 F.2d 1389 (CCPA 1974) (recognizing co-existence of design patent and copyright protection in some works).
43. *Aronson v. Quick Point Pencil Co.*, 440 U.S. 257 (1979).
44. L. Guibault, 'Wrapping Information in Contract: How Does It Affect the Public Domain?' and K. Koelman, 'The Public Domain Commodified: Technological Measures and Productive Information Usage', *see* pp. 87 and 105 in this volume.
45. *See*, e.g., Cohen, *supra* note 2; L.M.C.R Guibault, *Copyright Limitations and Contracts: An Analysis of the Contractual Overridability of Limitations on Copyright*, The Hague, London, Boston, Kluwer Law International 2002; N. Elkin-Koren, 'Copyrights in Cyberspace – Rights Without Law', 73 *Chi.-Kent L. Rev.* 1155-1200 (1998); P. Samuelson, 'Intellectual Property and the Digital Economy: Why the Anti-Circumvention Regulations Need To Be Revised', 14 *Berkeley Tech. L.J.* 519-566 (1999).
46. 17 U.S.C. sec. 104A.
47. *See*, e.g., E. Lee, 'The Public's Domain: The Evolution of Legal Restraints on the Government's Power to Control Public Access Through Secrecy or Intellectual Property', 55 *Hastings L.J.* 91-209 (2003), pp. 176-180.
48. Cohen, *supra* note 2.
49. Ochoa, *supra* note 12, at pp. 232-239.
50. Id., at p. 246.

or the public has a kind of ownership interest in the unencumbered information.[51] The public's right to use such information resources arguably precludes privatization of them.[52] The public domain has quite a different connotation. Carrying over the not-yet-privatized metaphor to an informational public domain would arguably make it presumptively privatizable by those who appropriate and invest in commercialization of public domain resources. The public interest is served, in this conception, by converting information resources into private property or protecting information resources from 'falling' into the public domain.[53]

Critics of 'property' conceptions of information resources might object to a map of the public domain because it reinforces the already too prevalent real property metaphor for information resources. [54] While unfair trade practices and unfair competition provide an alternative conceptual rubric within which to place rules that balance the interests of creators in obtaining a reward for the fruit of their labors and those of the public in obtaining access to creative works, neither is today a widely accepted framework within which to place copyright, patent, and other types of legal protections for information resources.[55]

To reject the idea of mapping the public domain because one doesn't want to contribute further to property-based discourse is perhaps understandable, but perhaps also short-sighted. Mapping the public domain enables it to become a terra cognita, a sanctuary, a refuge or a conservancy that the law ought to preserve and protect in the public interest. It contributes to conceptualizing the public domain as having a more equivalent status to intellectual property rights. It is a way to signal that the public domain has an important place of the universe of information resources.

The Relative Size and Centrality of the Public Domain and IPRs: Yet another objection to Figure 2 may be that it depicts the public domain at the center of the map and makes the public domain seem very big in relation to the IPR domains. Because the purpose of the public domain map is to make this domain more visible, it belongs at the center of the map. And if one believes, as I do, that the public domain is very large and diverse in contents, then a map depicting the public domain should

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51. Id. at p. 257.
52. Id. at pp. 262-263.
53. Cohen, *supra* note 2 (discussing pro-commodification arguments).
54. M.A. Lemley, 'Property, Intellectual Property, and Free Riding', 83 *Texas L. Rev.* 1031-1075 (2005). Michael Carrier has pointed out that the real property analogy does not inevitably mean IP protection should be stronger. M. Carrier, 'Cabining Intellectual Property Through a Property Paradigm', 54 *Duke Law Journal* 1-145 (2004).
55. Trademark and trade secret laws are still often categorized as unfair competition laws. *See*, e.g., *Restatement (3d) of Unfair Competition*, St-Paul (Minnesota), American Law Institute, 1993. In 1981, when I first started teaching intellectual property law, there were no 'intellectual property' casebooks (so named). The most widely used casebook was E. Kitch and H. Perlman, *Legal Regulation of the Competitive Process: Case Materials and Notes on Unfair Business Practices, Trademarks, Copyrights, and Patents*, Westbury (New York), Foundation Press, 1989.

reflect this. Besides, maps are 'social constructions' and 'inherently political.'[56]

One might also question the relative sizes of various IPR domains in relation to one another.[57] However, because this map depicts intangibles and has very different purposes than maps designed for use as navigation aids, distortions in the relative sizes of the domain are unimportant. It is, moreover, in the nature of maps to 'distort reality….[They] must use symbols that almost always are proportionately much bigger or thicker than the features they represent.'[58]

People often assume that maps are neutrally accurate depictions of reality,[59] but in truth, every map 'is a show, a representation.'[60] Maps are valuable because they translate the external phenomena into a graphical form that can aid understanding of those phenomena.

3. NORMATIVE REASONS TO MAP THE PUBLIC DOMAIN

This essay has thus far defended the idea of mapping the public domain, but has not made a normative case for doing so. A normative reason to map the public domain derives from the contribution a map can make to greater appreciation of the social values served by the public domain and its component parts. This, in turn, may be useful to a normative instantiation of the public domain in law, for example, identifying classes of public domain information resources that should be protected against privatization or proposing an international treaty to protect public domain information resources.

This essay is not, of course, the first essay to articulate values associated with the public domain. Yochai Benkler,[61] Michael Birnhack,[62] James Boyle,[63] Lawrence Lessig,[64] and Jessica Litman,[65] among others, have eloquently expressed the importance of the public domain to the ongoing creative process and to deliberative democracy. While I agree with these authors that some public domain information resources serve these values, it is fair to say that not every part of the public domain serves them. It is, for instance, a stretch to say that an uncopyrightable catalog of

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56. J.H. Andrews, 'Introduction', in J.B. Harley, *The New Nature of Maps*, Baltimore, John Hopkins University Press, 2001, p. 7.
57. It is not clear how 'big' to make the trademark, copyright or patent domains, nor open source software.
58. Monmonier, *supra* note 40, at p. 1.
59. Harley speaks of this as a positivist view of maps, namely, that they are objective, detached, neutral, transparent and accurate depictions. Andrews, *supra* note 56, at p. 5. Harley challenged this view, *supra* note 56, at pp. 5-9.
60. Id. *See also* Black, *supra* note 26, at pp. 17-19 (discussing the politics of cartography).
61. *See*, e.g., Benkler, *supra* note 28.
62. Birnhack, 'More or Better? Shaping the Public Domain', *see* p. 59 in this volume.
63. Boyle, *supra* notes 10, 13, and 27.
64. L. Lessig, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity*, New York, Penguin Press, 2004.
65. Litman, *supra* note 3.

lawn mower parts or an expired patent for a Rube-Goldberg-like-device that no one ever built serves to promote ongoing innovation, let alone deliberative democracy. Public domain advocates may leave themselves open to criticism if they seem to exaggerate the social value of the public domain.

A more comprehensive understanding of the public domain can be attained by setting forth the diverse contents of the public domain in a map and articulating the range of social values these diverse contents serve.

The public domain serves at least eight distinct, if often complementary, values: as building blocks for the creation of new knowledge, enablers of competitive imitation, enablers of follow-on innovation, enablers of low cost access to information, enablers of public access to cultural heritage, enablers of education, enablers of public health and safety, and enablers of deliberative democracy.[66]

Ideas, information, and scientific principles are perhaps the most universal of the public domain's contents and may serve all of eight values, though particular instances may serve only one or a small number of them. It may be socially useful for information about prices of lawn mower parts to be in the public domain in order to facilitate competition among parts manufacturers and low cost access to information, but the public domain status of this information does not promote ongoing innovation, public access to cultural heritage, public safety, or deliberative democracy. News, by contrast, may be chiefly valuable to have in the public domain in order to promote deliberative democracy and education. It may only rarely facilitate competitive imitation or follow-on innovation.

Figure 8 aims to depict the values of the public domain and to give illustrative examples of public domain contents that serve them:

Figure 8: Public Domain Values and Illustrative Contents

- Building blocks for creation of new knowledge (data, facts, information, ideas, theories, concepts, scientific principles)
- Enabling competitive imitation (expired patents and copyrights, publicly disclosed technologies not qualifying for patent protection)
- Enabling follow-on innovation (expired patents and copyrights, leaked trade secrets)
- Enabling low cost access to information so there is no need to locate owners, negotiate rights clearances, or pay royalties (expired copyrighted works or patented inventions, unoriginal data compilations, blank forms)
- Access to cultural heritage (information resources such as ancient Greek texts, Mozart symphonies, poetry of Walt Whitman)
- Promoting education (information, ideas, scientific principles)
- Promoting public health and safety (information, scientific principles)
- Promoting democratic process & values (news and for Americans, laws, regulations, judicial opinions)

66. It is also possible to regard the public domain as socially valuable because it promotes personal autonomy and artistic self-expression, but these are, for me, integrally related to such values as creating new knowledge and engaging in deliberative democracy, not separate values.

Figure 8 is not meant to suggest that each information artifact in the public domain necessarily serves at least one of these values. Grocery lists, for example, are among the public domain's contents that have at most transitory value to the person who needs them to shop for food and sundries, but they have no larger social value. Grocery lists are only one of the public domain's vast contents that are detritus (that is, lacking in social value). But it is fair to say that the public domain does not have a monopoly on detritus. Just because an information resource is protected by intellectual property rights doesn't mean it has any social or economic value. It is well-known that most patents have little or no commercial values,[67] and few copyrighted works attract audiences that enable their authors to recoup investments required to bring the works into being.[68]

The public domain also has serendipitous value. One day an information resource may be detritus and the next day, when someone has a reason to use it, the resource can suddenly become very socially valuable. During the summer of 2004, for example, I was working on a historical study of a famous and widely cited 1880 US Supreme Court copyright decision, *Baker v. Selden*.[69] Selden's widow sued Baker for copyright infringement, claiming that he had illicitly copied bookkeeping forms from Selden's books. The Court held that the copyright in Selden's books did not extend to the bookkeeping system or to the blank forms illustrating it.[70] The Baker and Selden books have been in the public domain for more than a century; they are no longer used for their original purposes because bookkeeping as a financial art has evolved considerably since the lawsuit between these two parties.[71] The Supreme Court Record contained a copy of one of Selden's six books and copies of the Baker and Selden forms. Because the forms and books are in the public domain, I was able to include copies of the former in my story on this case and copies of the latter on the IP Stories website.[72] The public domain status of the briefs and other materials in the Supreme Court Record means that I can post them on the website as well. My story draws upon these materials to show that the Supreme Court intended to convey a very different message in its *Baker v. Selden* decision than many courts and commentators seem to realize.[73] Suddenly, these musty old and seemingly

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67. *See*, e.g., J. Allison, M.A. Lemley, K. Moore, and D. Trunkey, 'Valuable Patents', 92 *Geo. L.J.* 435-477 (2004).
68. *See*, e.g., F.M. Scherer, 'The Innovation Lottery', in R. Dreyfuss, D.L. Zimmerman, and H. First (eds.), *Expanding the Boundaries of Intellectual Property: Innovation Policy for the Knowledge Society*, Oxford, Oxford University Press, 2001, pp. 3-21, at pp. 12-15 (showing skewed distribution of commercially successful sound recordings).
69. 101 U.S. 99 (1880).
70. Id. at p. 104.
71. Baker's books are among the historical works on bookkeeping and accounting mentioned in W. Hausdorfer, *Accounting Bibliography, Historical Approach*, Palo Alto, Bay Books, 1986. (Selden's books are not so cited.)
72. *Baker v. Selden*, in R. Cooper Dreyfuss & J. C. Ginsburg (eds.), *Intellectual Property Stories*, Westbury (New York), Foundation Press 2005.
73. Id. (discussing the legacy of *Baker v. Selden*). The Baker case is widely cited as a case about the idea/expression distinction. The Court was, however, mainly trying to convey that bookkeeping

useless public domain resources were essential inputs to the construction of new knowledge.

Sherman and Wiseman point out that some cultures have norms and values about information resources that do not comport with the Western-style IP norms embodied in the Agreement on Trade-Related Intellectual Property Rights (TRIPS),[74] including norms that exclude ideas, information, and principles from copyright protection.[75] Among member states of the World Trade Organization, it is common for nations to have a concept of the public domain, in the sense of a realm of informational works or resources that are free from intellectual property rights and there is considerable commonality in the contents of this public domain.

Ideas and information, for example, are nearly universal public domain resources, as are such things as scientific principles, mathematical formulae, historical or social science theories. Creative works as to which copyrights or patents have expired are also widely regarded as public domain information artifacts. Publicly disclosed inventions whose creators have failed to obtain patent or other industrial property protection are typically regarded as public domain as well. Trademarks that have become generic designations for certain goods or services—aspirin, thermos, escalator, to give a few examples—are also widely deemed to be IP-free (although unfair competition law will sometimes protect the former trademark owner from misleading uses of the generic term by competitors).

If international consensus can be achieved that these categories of information resources are in the public domain and should remain there because they serve important social values as public domain resources, this consensus could serve as a basis for preserving public domain resources as a matter of law. In the US, these categories of information resources can plausibly be argued to be constitutionally required.[76] In the international arena, such information resources could be considered core components of an international public domain, protection for which should be encouraged in national laws and perhaps in a treaty, perhaps as part of a treaty on protecting public access to knowledge.[77]

There may be other information resources that belong in an internationally recognized public domain. Americans would argue, for example, that laws and other legal information should be in the universal public domain.[78] But there may

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and other systems depicted in copyrighted works were unprotectable by copyright law, not that ideas were unprotectable.

74. Sherman and Wiseman, 'Towards an Indigenous Public Domain?', *see* p. 325 in this volume.
75. TRIPS Agreement, secs. 9(a), 10(b).
76. *See* Y. Benkler, 'Through the Looking Glass: Alice and the Constitutional Foundations of the Public Domain', 66 *Law and Contemp. Probs.* 173-224 (2003); Lee, *supra* note 47; Zimmerman, *supra* note 7.
77. *See*, e.g., Expert Meeting on the WIPO Development Agenda and a Draft Treaty on Access to Knowledge, Geneva, Switzerland, 3-4 February 2005, available at: <www.eifl.net/services/a2k_feb05.html>.
78. *See* L. Ray Patterson & C. Joyce, 'Monopolizing the Law: The Scope of Copyright Protection for Law Reports and Statutory Compilations', 36 *U.C.L.A. L. Rev.* 719-814 (1989), pp. 751-58 (explaining why laws and judicial opinions should not be copyright-protected). Michael Geist

also be some information resources, such as traditional knowledge emanating from developing countries, that would under Western-style IP laws be considered public domain resources, as to which there is a growing international movement in favor of recognizing IP rights.[79]

Perhaps over time, an international consensus will emerge that laws should be public domain information resources and traditional knowledge should not. Perhaps institutional structures will also evolve so that national and international legal protections for public domain contents can take into account consensus judgments on what belongs in the public domain and what does not.[80]

National and international legal protections for the public domain would be desirable, but broad-based efforts will surely be required to bring such measures into being. This essay's maps of the public domain and its explanations of descriptive, normative, and political reasons for such a map hopefully makes at least a small contribution toward these ambitious objectives.[81]

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has criticized Canadian crown copyright, arguing that Canada should decide not to protect laws and other legal information. M. Geist, 'Keeping an Eye on the Canadian Prize', *Toronto Star*, March 13, 2005, at: <www.michaelgeist.ca/resc/html_bkup/mar142005.html>.

79. *See*, e.g., A. Chandar & M. Sunder, 'The Romance of the Public Domain', 92 *Calif. L. Rev.* 1331-1373 (2004); Sherman and Wiseman, 'Towards an Indigenous Public Domain?', elsewhere in this volume.
80. There is general consensus that IP norms that have become customary rules of international law are TRIPS obligations. *See*, e.g., R. Cooper Dreyfuss and A. Lowenfeld, 'Two Achievements of the Uruguay Round: Putting TRIPS and Dispute Settlement Together', 37 *Va. J. Int'l L.* 275-333 (1997). Perhaps international IP norms will evolve so that public domain status of certain information resources will become a customary rule of international law as well. The TRIPS Agreement arguably provides a basis upon which an international public domain consensus could be built in reflecting that copyright protection is unavailable for ideas, concepts, procedures, methods of operation, mathematical concepts and data. TRIPS, secs. 9(a), 10(b).
81. The present volume makes a significant contribution to this conversation, as does K.E. Maskus and J.H. Reichman (eds.), *International Public Goods and Transfer of Technology Under a Globalized Intellectual Property Regime*, Cambridge (UK), Cambridge University Press, 2005 and N. Elkin-Koren and N. Netanel (eds.), *Commodification of Information*, The Hague, London, Boston, Kluwer Law International, 2002.

Chapter III

Economic Analysis of the Public Domain

Eli M. Salzberger

1. INTRODUCTION

In the past decade, the field of intellectual property has seen the most significant change since its birth following the invention of the printing press. On the one hand, the digital revolution has brought about a process of commodification and propertization – a vast increase in informational goods and services that are protected by property rules, either by law or by other means such as technology (which itself is protected by law against circumvention). On the other hand, we have seen the emergence of a social movement that seeks to halt or reduce this process of commodification. The preservation of the public domain is a key issue for this movement. It is argued that the legislature and the courts are surrendering to the big media and other powerful interest groups by enhancing the scope of intellectual property and increasing control over creativity, thus effectively shrinking the public domain.[1]

In the course of this debate the exact meaning of the term 'public domain' has also changed. Originally it was defined as including creations for which intellectual property protection had expired. Then it also encompassed statutory limitations to intellectual property rights, such as fair use,[2] and now it may even refer to any information resource for which legal rights to access and use for free are held broadly.[3] The definition of the public domain that I will adopt in this chapter includes creations that were not initially subject to intellectual property, and this definition, in fact, equates the 'commons' with the public domain. This is a good working

1. L. Lessig, 'Coase's First Question', 27 *Regulation* 38-41 (2004).
2. W. Gordon, 'Fair Use as a Market Failure: A Structural and Economical Analysis of the Betamax Case and its Predecessors', 82 *Columbia Law Review*, 1600-1657 (1982).
3. A. Chander and M. Sunder 'The Romance of the Public Domain', 92 *California Law Review*, 1331-1373 (2004), at p. 1338.

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 27–58

definition from a law and economics perspective, knowing that one of the major rationales of law and economics for propertization is the 'tragedy of the commons', or, according to our working definition, the tragedy of the public domain. I will return to the definition of the public domain in section 6, where I will question the dichotomy between intellectual property and the public domain and propose a more complex view of property rights.

The debate between property supporters and the advocates of the public domain is portrayed by some scholars as a debate between the law and economics movement on the pro-propertization side, and progressive scholars on the pro public domain side. Thus, for example, Chander and Sundler write: 'Since Hardin, law and economics scholars have launched a crusade to expose the evil of the commons – the evil, that is of *not propertizing*. Progressive legal scholars have responded in kind, exposing the perils of *propertization*'.[4] In this chapter, I will try to show that this labeling is inaccurate and that the law and economics analysis is more complex than what is usually presented. For this purpose, I will begin with a few words on my own perception of the law and economics approach, which is somehow different from, and much broader than, the traditional conception of this movement (section 2).

But already from my opening statement, it is clear that law and economics insights can be useful to both sides of this debate. On a positive level of analysis, the ongoing commodification of information can be perceived as an inevitable phenomenon, based on the traditional positive analysis of Harold Demsetz on which I will elaborate in section 3. Moreover, the accusations of the pro public domain camp against the course of legislative and judicial expansion of intellectual property is in itself an insight of law and economics, or, more precisely, of its sub-field of public choice theory, portraying this legal change as the result of pressure by powerful interest groups.

On a normative level of analysis, the opposition of intellectual property rights versus the public domain is confusing within the law and economics paradigm itself. First, economists generally favor free markets over government regulation, but in the context of intellectual property it is not clear whether creating intellectual property rights by law is a manifestation of the free market or a case of government intervention. On the one hand, the main tool to create intangible property is the law; hence intellectual property belongs in the interventionist camp. On the other hand, markets can operate only on the basis of (private) property; in other words, property is a basic pre-condition for the market to operate. Hence intellectual property is an integral part of a free market.

Second, the prime normative goal of law and economics is to maximize the welfare of society. Without intellectual property, incentives to create will be lacking and thus new drugs would not be developed, new ideas would not be published, cultural and scientific progress would cease or significantly slow down, decreasing the welfare of society. However, most new inventions are based on older ones, whether this is scientific innovation or cultural creation. Full propertization of every idea and

4. Id., at 1332-3.

expression would, therefore, slow down scientific and cultural progress. In order to enhance society's welfare, we do need a significant public domain. Granting intellectual property rights, therefore, works in both directions. It stimulates innovation and creation, thus increasing total welfare, while at the same time creating barriers to further innovation and creation, decreasing welfare growth. This requires a more sophisticated framework of analysis to achieve the right balance. This aspect will be discussed in section 4.

In section 5, I will elaborate on the economics of the digital realm, which ought to change the parameters underlying the traditional economic rationale of intellectual property and thus of the public domain. One of the most important features in this context relates to the state of technology and its pace of change, traditionally taken as an exogenous variable within the law and economics analysis. I will argue that the state of technology ought to be endogenized, transforming the equilibrium of traditional analysis and also affecting the analysis of traditional market failures such as high transaction costs, which may no longer play a crucial role in the choice of legal rules.

2. LAW AND ECONOMICS AND INTELLECTUAL PROPERTY

The law and economics movement can be described as an application of economic theory to examine and evaluate the formation, structure, process and impact of law and legal institutions. The science of economics has come a long way since its definition in the mid 19th century by Marshall as 'a study of man's action in the ordinary business of life; it inquires how he gets his income and how he uses it'.[5] This definition focuses on economic markets, whereas economic science today also addresses non-economic markets and indeed human interactions that are not part of any market activity. Already in 1932,[6] Robbins defined economics as a 'science, which studies human behavior as a relationship between ends and scarce means which have alternative uses'. This definition of the science of economics as a science of choice implies that economics today can be perceived as a grand theory.[7] Taking into account game theory and social choice as sub-fields of economics maybe even Robbin's broad definition of economics is no longer broad enough today.

I believe that a more accurate description of the science of economics, and by derivation, of the law and economics movement is not through its objects of analysis or (right-wing) ideology, but through its methodology. The economics methodology is based on (1) simplifying a very complex reality, (2) applying a rigorous model

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5. A. Marshall, *Principles of Economics*, London, Macmillan, 1922.
6. L. Robbins, *An Essay on the Nature and Significance of Economic Science*, London, Macmillan, 1932, p. 16.
7. Q. Skinner, *The Return of Grand Theory in the Human Sciences*, Cambridge, Canto, 1990. In this sense the contemporary scope of economics resembles its perception by its modern founder (Adam Smith) more than its perception by the 19th century economists (primarily Marshall) who developed some of its major methodological tools. Hence Skinner's book title.

to analyze this simplified reality, (3) deriving results from the model as to possible causal connections between its various variables and (4) deducing insights with regard to the real world based on the model's results.

One of the main advantages of this methodology is that it is evolutionary: one can construct a simple model based on far reaching simplifying assumptions, and develop this model gradually by relaxing or complicating some of these assumptions.[8] In this sense the Chicago school, which uses the basic microeconomics market model and applies it to law can be perceived as a first generation, while neo-institutional analysis or behavioral law and economics can be seen as a second or third generation.[9] The other advantage is that such a methodology provides the academic community with a common language, and the debates regarding the subject matter of the analysis can focus on the model, on the conclusions from the model regarding the real world, and indeed on the simplifying assumptions.

In a similar way to the science of economics, the law and economics movement is popularly identified with efficiency or wealth maximization, as a great supporter of free markets and as an opponent to government or central intervention in market activities. This perception is somewhat partial or even distorted. Indeed, in the area of intellectual property the traditional law and economics analysis does not believe in 'natural' markets and advocates central intervention by granting intellectual property rights, on the basis of which market transactions can take place. In this specific field the definition of 'market' is crucial and, as I will try to show later, the public domain can be (and ought to be) perceived as a sort of a market. Hence the law and economics approach should not be viewed as a priori in favor of intellectual property rights and against the public domain. In addition, wealth maximization is not the only possible objective of the law and economics approach, and once other normative principles are taken into consideration in the foundation of this approach the popular view of the stances of Law and Economic can be disputed.

The law and economics movement is engaged in two different projects – the normative analysis and the positive analysis. The normative analysis tries to tell us what the desirable legal or constitutional arrangements are. To perform such an analysis one has to define a normative objective, the source of which is outside the scope of the science of economics. The leading normative goal of most economic analyses literature is indeed efficiency. However, there are several competing definitions of efficiency – maximization of utility, maximization of wealth, Pareto optimality – and competing views regarding the goal of efficiency as the primary

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8. However, this process of simplifying the reality through intended unrealistic assumptions is a source of specific ideology to implicitly enter economic analysis.
9. N. Mercura and S. Medema, *Economics and the Law: From Posner to Post-Modernism*, Princeton, Princeton University Press, 1997; N. Elkin-Koren and E. Salzberger, *Law, Economics and Cyberspace: The Effects of Cyberspace on the Economic Analysis of Law*, Cheltenham, UK, Edward Elgar Publishing, New Horizons in Law and Economic Series, 2004, Ch. 1.3. The main task of neo-institutional law and economics is to take on board the fact that behavior and actions are not only the result of individual decisions, but the result of collective decisions which are affected by the institutional structure and decision-making rules within institutions. The main task of behavioral law and economics is to relax the assumption of full rational behavior.

normative principle[10] or as a second best to utility maximization as viewed by welfare economics. In addition, a major share of constitutional law and economics relates to another normative goal (which is also one specific notion of efficiency) emanating from different historical roots – the social contract theories of the state – consensus or Pareto optimality.

The two major normative paradigms to analyze intellectual property are the natural law paradigm (which is dominant in the Continental European legal world) and the positivist one (which is dominant in the Anglo-American legal tradition). The natural law paradigm is outside the reach of law and economics, as it is deontological rather than teleological; it judges whether a law, decision or action, is right or wrong on the basis of its intrinsic moral value without regard to its consequences. Thus, a Lockean type of natural law justification to property rights, including intellectual property rights, is outside the scope of law and economics, as is the Kant-Hegel self-fulfilling or self-flourishing justification for the protection of intellectual property. In contrast, a republican justification for intellectual property can be analyzed within the law and economic discourse, as, of course, the utilitarian theory of intellectual property.[11] From a law and economics perspective, the difference between the classical utilitarian justification and the republican one lies with the assumptions regarding individual preferences. While the utilitarian approach views preferences as exogenous to the analysis, the republican approach posits that the legal arrangements themselves can affect the basic individual preferences in a way that will make them more cooperative or altruist and less distant and conflictual, allowing the extension of the frontiers of general utility.[12]

These very general and philosophical observations are important in the context of the public domain. This concept exists beyond the specific intellectual property context and is part of a republican vocabulary. The public domain, like the public sphere, is a place in which individuals meet each other, interact, exchange views and information, attempt to influence each other's opinions and preferences and indeed absorb inspiration and ideas for creation. Thus, under an analytical framework which assumes endogenous preferences, the development and preservation of such public spaces are beneficial from a point of view of welfare maximization, because once individuals change their preferences towards more altruist ones, the collective is able to reach utility or wealth frontiers that were not available with the sets of initial preferences. In the context of intellectual property, the public domain is not merely a place of free flow of information and opinions; it is also a place of production or even a means of production, and unlike the traditional production means of land, labor and, to lesser degree, capital, the public domain is not rivalrous or exclusive. In the course of this chapter we will examine how this multi-purpose public domain

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10. R. Posner, 'Utilitarianism, Economics, and Legal Theory', 8 *Journal of Legal Studies* 103-104, (1979).
11. On these four normative sources of theories of intellectual property, *see*: C. Fisher, *Rebating Environmental Policy Revenues: Output-Based Allocations and Tradable Performance Standards*, Discussion Paper 01-22, Resources of the Future, Washington, 2001.
12. Elkin-Koren and Salzberger, *supra* note 9, Ch. 10.

affects the traditional analysis regarding both efficiency in production and efficiency in allocation.

Positive law and economics analysis tries to explain why things are as they are or to describe legal phenomena in economic language. It portrays causal connections between various variables in the legal and economic arenas. The growing contribution of institutional law and economics highlights the central role that the institutional structures play within positive analysis, and rightly so. The public domain in this context can be viewed as a unique institution, which like other institutions affects individuals' choices and social outcomes.

One of the weak points of the economic analysis of law approach is the inner equilibrium between normative and positive analyses. Since both positive and normative analyses are founded upon specific assumptions as to human behavior, it is very possible that the normative prescription of the desirable legal arrangement is different from the positive analysis of what legislatures and courts will actually do. What is the use of constructing a normative theory if the same underlining assumptions lead us to predict that the recommended solution does not stand a chance of being selected.[13]

The most important general premise of the economic theory is that open competition within a perfect market will lead to efficiency, which is the most desirable social outcome. The concept of efficiency in economic theory relates to both the production of goods and their allocation. Efficiency in production means that it is impossible to produce more goods using the available resources. Efficiency in allocation means that it is impossible to transfer goods among individuals in a way that makes one individual better off without improving the lot of others (Pareto efficiency), or that it is impossible to enhance the total welfare of society by further transfers of goods or services (Kaldor-Hicks or welfare maximization efficiency). Yet, the term efficiency can be defined in a broader way. It can encompass both Thomas Hobbes' analysis of the creation of the state as an efficient solution to the problems of the state of nature, and Adam Smith's analysis of the invisible hand as the balancing factor of human markets. Again, the complexity of the intellectual property concept of the public domain is that it encompasses both a place of production and a place of consumption, and it relates both to traditional economic activities and to traditionally non-market activities.

The premise that open competition within a perfect market will lead to efficiency contains a positive component (open competition will lead to efficiency) and a normative component (efficiency is the desirable social outcome). This general premise was advanced by the economic approach to law in several directions, the two most important being the economic theory of the state and the limits of free markets justifying central intervention. The economic theory of the state analyzes

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13. The distinction between normative and positive analyses is not exclusive to the economic approach. Thus the core questions of jurisprudence or the philosophy of law are what law is, and what law ought to be and what are the inter-relations between these two questions. However, this distinction is crucial in law and economics, because of the common assumptions as to human behavior.

the emergence of the state, its central government, and its institutional structure as derived from problems of collective action that are market failures of sorts. Studies of the limits of the free market seek to identify the circumstances in which central government or central governance is justified, or should take place in order to shift the market (imperfect) solution. Only in such circumstances should government intervene. Such circumstances are once again related to market failures. Four traditional market failures are commonly mentioned: monopolies or excessive market powers, lack or a-symmetry of information, public goods and externalities.

This traditional market analysis, however, assumes three important assumptions that precede the operation of a free market: a given community, a given state of technology, and a given allocation of property rights among the players in the market. The former presumption includes both a set composition of a community and a given set of preferences or utility functions of each of its members. The latter relates both to the objects of property, as well as to its original allocation, from which a free and competitive market will enhance the general welfare or the wealth of a specific community. In other words, a free and competitive market will maximize efficiency for a set community, comprising members with given preferences and resources under a set technological state. When we discuss the concept of a public domain we have to relax these presuppositions.

When focusing on the public domain, the problem of distinguishing between normative and positive analysis becomes apparent. Property rights are analyzed in the discourse of law and economics within two broad frameworks: the incentives paradigm and the tragedy of the commons paradigm. In the next two sections, I will try to present these two paradigms in the context of the normative-positive distinction and with some insights into these rationales when applied to intellectual property and the public domain.

3. THE TRAGEDY OF THE COMMONS PARADIGM AND THE POSITIVE ANALYSIS OF THE PUBLIC DOMAIN

The tragedy of the commons is the dominant paradigm in law and economics for the positive analysis of property in general, and land law in particular. However, it can easily be extended to explain intellectual property and its connection with the public domain; it can also be viewed as a normative analysis of property, of intellectual property and, by derivation, of the public domain.

Parallels are drawn between the English enclosure movement, the process of fencing off communal land and turning it into private property, which lasted from the 15th to the 19th century, and the recent trend of commodification of information and the expansion of intellectual property rights.[14] From a law and economics perspective the first enclosure movement is treated mainly in the context of the tragedy of the

14. J. Boyle, 'The Second Enclosure Movement and the Construction of the Public Domain', 66 *Law and Contemporary Problems* 33-74 (2003).

commons paradigm, which is dominated by positive analysis. Although the term tragedy of the commons is attributed to Hardin,[15] it was in fact Harold Demsetz[16] who offered this theoretical framework to analyze the concept of property rights.

Demsetz holds that property rights emerge in response to the desires of economic actors to adjust to new benefit-cost possibilities. Thus, 'the emergence of new private or state-owned property rights will be in response to changes in technology and relative prices'.[17] His analysis begins with an absence of property rights, thus rejecting the natural law concept of property rights. Land, and what is on it, is owned by no one, or rather by everyone. This can be an optimal and static equilibrium if every individual can use and produce from the land all he or she is seeking for. Population growth and density may change this equilibrium. So does an increase in demand that is beyond the consumption needs of the local population. Once such a situation occurs a clash between individuals over the land and what is on it will take place, which will bring about over-consumption and a 'tragedy of the commons', making all individuals worse off than before.

Demsetz compared the creation of property rights by the Native Americans in the Northeast and to the same in the Southwest. When hunting was carried on primarily for purposes of food and the relatively few furs that were required for the hunter's family, Demsetz wrote, 'Hunting could be practiced freely and was carried on without assessing its impact on other hunters … There did not exist anything resembling private ownership in land.'[18] But the fur trade changed that. First, the value of the furs to the Indians increased considerably. Second, and as a result, the scale of hunting activity rose sharply. So the tribes developed territorial hunting and trapping rights to make sure that the resources were cared for prudently and to enhance long-term efficiency.

Why didn't the indigenous peoples of the American Southwest develop similar institutions? Demsetz cites two reasons. First, in their area there were no animals of commercial importance comparable to the fur-bearing animals of the North. Second, those animals that did populate the Southwest were primarily grazing species that tended to wander over large tracts of land, making it difficult to prevent them from moving from one parcel to another. 'Hence both the value and cost of establishing private hunting lands in the Southwest are such that we would expect little development along these lines. The externality was just not worth taking into account,' wrote Demsetz.[19]

It is important to emphasize that Demsetz provides us with a positive analysis of the development of property rights, which is also a dynamic analysis portraying the process of propertization (and de-propertization). This description does not involve a state or central government, which is called upon to intervene in market activities.

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15. G. Hardin, 'The Tragedy of the Commons', 162 *Science* 1243-1248 (1968).
16. H. Demsetz, 'Towards a Theory of Property Rights', 57 *American Economic Review* 347-360 (1967).
17. Demsetz, *supra* note 16, at 349.
18. Ibid, p. 351.
19. Ibid, p. 352.

Implicitly, the description of Demsetz is also his normative analysis. Demsetz endorses the creation of property rights because it fulfils the efficiency criterion, defined probably in terms of both welfare maximization and Pareto optimality. His theory is based on an equilibrium between normative and positive analysis.

The current changes in intellectual property laws – the process of commodification of information or the 'second enclosure movement' – is in line with Demsetz's theory, according to which the emergence of new private or state-owned property rights will be in response to changes in technology. However, three major differences must be pointed out and looked upon more carefully when we apply Demsetz's theory to the contemporary analysis of the expansion of intellectual property and its effects on the public domain. First, in contrast to land, information is non-rivalrous; its use or consumption does not prevent others from parallel consumption. Nonetheless, unlike land, information has to be produced in order to be consumed, and free usage by everyone can affect the incentives to produce it in the first place. In addition, it can be argued that free consumption of informational goods would reduce the value of this information for each user. In other words, the tragedy of the commons in informational goods is different from the tragedy of the commons in land, and we will have to examine whether these differences are such that the dynamic of propertization of information is substantially different from Demsetz's description.

Second, Demsetz's analysis assumes technology to be an exogenous variable in the process of the emergence of property rights. He indeed relates to the effects of technological change on the creation of property rights, but not to the effects of property rights on the course and pace of technological development. Since technological changes today are much more rapid and dynamic it is problematic to ignore them as an essential variable in the analysis of property. I will elaborate on this point in section 5. Third, Demsetz portrays the emergence of property rights as the result of market activities without the intervention of the state or central government. This fact enables him to ignore the public choice side of the story. Collective action problems, interest groups and rent seeking are absent from the analysis. This is not the case with the 'second enclosure movement' and we will have to take on board this difference seriously when applied to the current debate regarding the public domain.

The analysis of Demsetz can be extended to de-propertization as well. According to his rationale, if governments (or courts or other collective decision-making bodies) intervene in the market of property rights, as in the contemporary situation, market activities can bring about de-propertization. The phenomena of open source, creative commons and other forms of enhancing the public domain can be seen as market responses to the inefficient expansion of property rights by central agencies.[20] The same positive and dynamic analysis offered by Demsetz for describing the creation of property rights can serve to analyze the expansion of the public domain in the

20. It is noteworthy that such de-propertization movements avail themselves of the existing legal instruments of contract and property law to perform the shift towards de-propertization. *See* N. Elkin-Koren, 'Exploring Creative Commons: A Skeptical View of a Worthy Pursuit', *see* p. 325 in this volume.

shadow of a strong, or overly strong, property rights regime. Demsetz himself hinted at this direction by asserting that '[t]he greater are diseconomies of scale to land ownership the more will contractual arrangement be used by the interacting neighbors to settle these differences. Negotiating and policing costs will be compared to costs that depend on the scale of ownership, and parcels of land will tend to be owned in sizes which minimize the sum of these costs'.[21]

Demsetz' theoretical framework does not only allow for a dynamic of de-propertization, but it also mentions the variables that can predict such a process, some of which may fit the description of the new mode of production of informational goods.[22] Demsetz referred to the analysis of corporations as an alternative structure of property rights, stating that '[t]he interplay of scale economies, negotiating cost, externalities, and the modification of property rights can be seen in the most notable 'exception' to the assertion that ownership tends to be an individual affair: the publicly-held corporation. I assume that significant economies of scale in the operation of large corporations is a fact and, also, that large requirements for equity capital can be satisfied more cheaply by acquiring the capital from many purchasers of equity shares. While economies of scale in operating these enterprises exist, economies of scale in the provision of capital do not. Hence, it becomes desirable for many 'owners' to form a joint-stock company'.[23]

Benkler emphasizes the peer production mode as an alternative to production within a firm. However, if we focus on the property rights aspects of the new production mode, the analogy between corporations and the market-driven enlargement of the public domain can be of great interest. Demsetz' statement regarding the nature of corporations can actually, with small modifications, describe the property rights aspect of the peer production process emerging today.[24] The decrease of transaction costs and contract formation costs is leading to greater production outside firms and back into the markets. However, the atomization of joint work efforts enabled by the new technologies creates a new type of market activity not seen before the Internet revolution.

To summarize, the tragedy of the commons paradigm offers us a fruitful positive law and economic model of the current state of the public domain: both its initial shrinkage as the result of intellectual property expansion, and more importantly its subsequent expansion in the shadow of intellectual property, due to inefficient legal intervention and rapid changes of technology. Since the tragedy of the commons is also an implicit normative analysis we can conclude that law and economics is not merely biased in favor of propertization, but that it also endorses a viable public domain.

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21. Demsetz, *supra* note 16, at 357.
22. Y. Benkler, 'Coase's Penguin, or, Linux and the Nature of the Firm', 112(3) *Yale Law Journal* 369-447 (2002).
23. Demstez, *supra* note 16, p. 357.
24. Elkin-Koren and Salzberger, *supra* note 9, pp. 62, 130-136.

4. THE INCENTIVES PARADIGM AND THE NORMATIVE ANALYSIS OF THE PUBLIC DOMAIN

The incentive paradigm is the main contemporary law and economics framework for the normative analysis of intellectual property. I will first elaborate on its essence, its differences with the tragedy of the commons paradigm and the implications of these differences for the public domain. Subsequently, I will discuss the alternatives to intellectual property rights within this framework, as well as their effects on the public domain.

4.1. THE INCENTIVE PARADIGM VERSUS THE TRAGEDY OF THE COMMONS

Like the tragedy of the commons framework, the incentive paradigm in the domain of intellectual property is an extension of the original analysis of property rights in physical objects.[25] As a pure normative analysis, the starting point is a normative goal, which, as explained above, is external to law and economics. This goal is efficiency defined in terms of wealth maximization.[26] I have noted before that efficiency is not the only possible normative principle for the economic analysis of law and that there are several competing definitions of efficiency, but once one acknowledges that government intervention is needed to facilitate a desirable structure of intellectual property it is obvious why efficiency in our context is translated into maximization of wealth, rather than Pareto optimality or maximization of utility. In any case, internal debates within law and economics as to the preferred normative goal of intellectual property arrangements are scarce.

The incentives paradigm focuses on the legal instruments needed to maximize society's wealth. It recognizes that while in a world without intellectual property rights there will be no incentives to create (or limited incentives to do so) and property rights should therefore be established, propertization also hinders the creative process, as new creations in most cases rely on previous ones. In this sense, one cannot describe the law and economics model as a priori pro propertization and anti public domain. The question is rather what is the optimal extent of intellectual property and the public domain, or the right mixture of the two that will maximize society's wealth. However, this question leaves out two important factors that are not addressed by the core model: the definition of the society (state, territory) for which we are seeking to maximize wealth and the definition of a time frame for such maximization.

The two factors are less crucial (but not absent) in the analysis of traditional property (tangibles and land), as physical property is connected to a specific territory.

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25. W. Landes and R. Posner, *The Political Economy of Intellectual property Law*, AEI Brookings Joint Center for Regulatory Studies, Washington D.C, 2004, p. 11.
26. Id., Ch. 1.

Save exceptional externalities, it usually already exists and has a relatively long-term value. Intellectual property has no geographical barriers (or minor geographical barriers of language) and its term of value can vary significantly from news items of only momentary value to large scientific breakthroughs or major ideas with almost eternal effect. In addition, intellectual property is mostly hypothetical or pre-creation and thus the impact of current intellectual property and the public domain regulation is crucial for future creation of potential property. For intellectual property, therefore, the two questions – whose wealth we are seeking to maximize and what is the time frame for such maximization – become highly important.

Indeed, the debate between third world countries and the industrialized world regarding patents on medications exemplifies the crucial factors of territory and time span. If the unit for which we seek to maximize wealth is the traditional national state, American intellectual property laws should not take into account their impact on people suffering from illnesses in Africa, save some minor potential wealth effects of the decreasing population in Africa on American's wealth (such as a decrease in exports to Africa). If the unit for which we maximize wealth is global, the picture becomes entirely different. In other words, a crucial factor in setting the desirable extent of intellectual property laws for a specific jurisdiction is the balance of trade of this jurisdiction in creations. A state that exports more products of the mind than it imports, will opt for a broad extent of intellectual property, whereas a state that is mainly an importer will find it more efficient for its citizens to set a low degree of intellectual property protection.

Similarly, if the time unit for wealth maximization is momentary or short, then most intellectual property ought to be in the public domain – the price of medications should be their marginal production cost, because the potential effect on future creation is not taken on board. If the time unit for such maximization is long, then the incentives to create should be taken into consideration. But how long should this time unit be, and how can we possibly predict the impact of today's regulation on future creation, especially in environment in which technological progress (which itself depends on the current intellectual property regulation) is so rapid? The growing pace of technological change decreases even the relevancy of the few empirical studies on the impact of intellectual property laws on cultural and scientific progress. In short, setting the time frame for wealth maximization is problematic from both conceptual or theoretical point of view and an empirical one.

The incentives paradigm has several common features with the tragedy of the commons paradigm, but also several important differences. The main similarity between the two concerns the major rationale for propertization (and de-propertization). Like the argument from the tragedy of the commons discourse – that without property rights we will witness, on the one hand, overuse of the common resources, and, on the other hand, lack of incentives for private investment to optimize the production capabilities from the resource and its potential value – the incentive discourse argues that without intellectual property rights there will be no sufficient incentive to invent and create. Demsetz himself connected the two when he wrote in the last part of his path-breaking article: 'Consider the problems of copyright and patents. If a new idea is freely appropriable by all, if there exist communal rights

to new ideas, incentives for developing such ideas will be lacking. The benefits derivable from these ideas will not be concentrated on their originators. If we extend some degree of private rights to the originators, these ideas will come forth at a more rapid pace'.[27]

However, there are a few important differences between physical property and intellectual property and thus between the tragedy of the common land and the incentive paradigms. First, as I mentioned before, informational goods are non-rivalrous. Consumption by one will not prevent simultaneous consumption by others. In this sense, lack of propertization of ideas will not create a tragedy of the commons in the sense of over-consumption. One can argue that instead of over-consumption of physical objects, in intellectual property we will witness a decrease in value for users with the increase of the number of other users (see below Landes and Posner's recent argument). But the opposite can also be argued: that increasing parallel use creates a positive network effect. In other words, the value for a user will increase when others use the same creation, especially when we are talking about communicative products – software, cultural creations, etc. The non-rivalrous effect of intellectual property, it seems, does matter, but its impact is in two opposing directions, the dominance of which cannot be determined without empirical data.

A Second difference between the two frameworks is that for the new property the same rationale, which points towards the propertization of ideas – incentive to create, is also pointing to the fact that such propertization will leave less ideas to be the source for new creations. In other words, propertization of ideas works in both directions when the goal is to maximize creation, knowledge and progress. It can be argued that this phenomenon has an equivalent in the tragedy of the commons physical world, as the tragedy is not only reflected by over-consumption, but also by lack of investment to enhance the value of the property. But in the context of intellectual property this consideration works in an opposite direction: while propertization in physical objects works mainly as a positive incentive to invest and enhance the value of the property, propertization of ideas will decrease the sources for new creations and thus its future volume. For these two reasons, intellectual property rights, unlike property rights in land and tangibles, are thought to be a good mechanism to maximize incentives only if they are given for a limited time and with various exceptions, such as fair use.

It is interesting to note that Demsetz himself ignored these two differences and pointed to another difference between intellectual property and physical resources. He wrote: 'But the existence of the private rights does not mean that their effects on the property of others will be directly taken into account. A new idea makes an old one obsolete and another old one more valuable. These effects will not be directly taken into account, but they can be called to the attention of the originator of the new idea through market negotiations. All problems of externalities are closely analogous to those, which arise in the land ownership example. The relevant variables are

27. Demsetz, *supra* note 16, p. 359.

identical'.[28] Demsetz's point is a little vague because it is not clear whether this is an argument from a distributive justice perspective or an inner efficiency one (and if so, what is his precise concept of efficiency). Demsetz ignored the two differences I mentioned here probably because his argument is constructed within the category of externalities as a market failure, which requires central intervention and correction, while the contemporary analysis of intellectual property is conducted in context of the public goods category of market failures.[29]

The focal point of the public good analysis is that since the marginal costs of copying a work or a creation are minimal (almost zero) the market price of a non propertied work will be so low that it will not cover the initial investment of its creator and thus new works will not be developed. Only propertization of such works will grant sufficient incentives for their creation in the first place. Landes and Posner set this framework.[30] They portray copyrights (and by extension other types of intellectual property) as a mechanism to enhance incentives to create, but acknowledge that the benefits should be outweighed with the administrative costs of registration and enforcement and, more importantly, with the shrinkage of the public domain, which is the main source for new ideas and creations. Thus, they write: '… beyond some level copyright protection may actually be counterproductive by raising the cost of expression … Creating a new work typically involves borrowing or building on material from a prior body of works … The less extensive copyright protection is, the more an author, composer, or other creator can borrow from previous works without infringing copyright and the lower, therefore, the costs of creating a new work'.[31]

In a later paper, however, Posner and Landes change their analysis and advocate for an indefinitely renewable copyright, instead of intellectual property rights limited in duration.[32] It is puzzling how in this recent article the authors ignore the major reason, mentioned in their earlier piece, for limiting the duration of intellectual property – that propertization, while, on the one hand, provides incentives for creation, on the other hand, limits the sources for new creation and thus is likely to reduce such creation. Instead they specify six other reasons, connected mainly to transaction costs, for limiting the duration of intellectual property and argue that these reasons are not convincing.

The main thrust of their later argument is disputing the first difference I mentioned above between land and informational goods – the public good nature of the latter, which will prevent a tragedy of the commons even if there is no propertization. Posner and Landes argue that this is not correct because overuse of ideas, images,

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28. Ibid.
29. Traditional microeconomic analysis points to four major market failure – monopolies, public goods, a-symmetric information and externalities.
30. Landes W. and Posner R. 'An Economic Analysis of Copyright Law'. 18 *Journal of Legal Studies,* 325-363 (1989).
31. Id., at p. 332.
32. W. Landes and R. Posner, 'Indefinitely Renewable Copyright'. 70 *University of Chicago Law Review* 471-518 (2003).

literary characters etc. will decrease their value and hence their usage is, in fact, rivalrous. Their main example is Disney's Mickey Mouse, on which they write: 'If because copyright had expired anyone were free to incorporate the Mickey Mouse character in a book, movie, song, etc., the value of the character might plummet. Not only the public would rapidly tire of Mickey Mouse, but his image would be blurred, as some authors portray him as Casanova, others as catmeat, others as an animal-rights advocate, still others as the henpecked husband of Minnie'.[33]

Posner's and Landes' point is similar to Demsetz's qualifications regarding the potential effects of new ideas and creations on old ones, and in this sense the differences between land and informational goods might not be so big as Landes and Posner portray. However, they ignore the network effect mentioned above, which is likely to balance the decreasing value. More importantly, in their later paper, Landes and Posner ignore the main point, e.g. the contribution of the ideas and creations in the public domain as incentives and the likelihood of developing new ideas and creations, which is the main characteristics of informational goods, distinguishing them from tangibles and real estate. In this sense, the major difference between the informational public domain and the physical public sphere is that the former is not only a common pool for non-rivalrous consumption, but also a common production mean, which can foster Pareto improvement not only in consumption but also in production.

One of the overlooked differences between the incentives framework and the tragedy of the commons one is related to the normative-positive distinction within the law and economics movement. The incentive framework is a purely normative analysis, while the tragedy of the commons, as I noted before, originates from a positive analysis. In this sense, while the tragedy of the commons framework for property rights can be presented as creating an inner equilibrium between positive and normative analyses, the incentive paradigm as a pure normative analysis that has to be implemented by law-makers in order to materialize, is exposed to manipulation by interests groups, social choice problems and other public choice obstacles. It lacks equilibrium between normative and positive analysis, or, in other words, it cannot forecast whether the desirable (optimal) solutions will be implemented on the basis of the same fundamental assumptions of the law and economics paradigm as a whole, especially the assumption of rational behavior.

This point is especially important in the context of the contemporary debate about the public domain. While the supporters of intellectual property extension comprise a relatively small group of people (or rather corporations) which is likely to get well organized because their costs of collective organization will be lower than the expected benefits from such organization, the supporters of a greater public domain encompass many individuals whose individual gains from organization is likely to be smaller than the immense organization costs; thus their likelihood to influence the decision-makers will be much lower than that of the intellectual property lobbies. The legislative results, therefore, will reflect a bias (in terms of the optimal

33. Landes and Posner, *supra* note 32, p. 488.

point according to the incentive analysis itself) towards the intellectual property camp, and thus a distorted balance between intellectual property and the public domain will ensue. The changing structure of the relevant markets, concentration of market powers in the hands of few publishers and the emergence of interested mega-corporations in recent decades can provide an additional explanation for the increasing propertization and commodification in our times.

If this description is accurate and legal rules result in sub-optimal solutions due to public choice problems we can envisage market corrections to the law, through contractual means. In other words, individuals who favor a greater public domain at the expense of propertization are likely to channel their political activities to the market instead of the political sphere. Indeed, the Creative Commons project is exactly a contractual shift from the legal regime.[34] This setup can characterize also the open source project and other peer production phenomena.

A final difference between the tragedy of the commons framework and the incentive one is connected to the concept of efficiency of the two models. The incentive paradigm, as explained above, is preaching for intellectual property laws that maximize total wealth. The tragedy of the commons can be viewed as directed towards Pareto optimality definition of efficiency. This difference is directly related to the role of central government in the incentive model, which is absent in the tragedy of the commons one.

4.2. Alternatives to Intellectual Property within the Incentive Paradigm and their Effects on the Public Domain

The central government plays an important role in the discussion on the public domain vis-à-vis the incentive rationale. Unlike the deontological rationale for intellectual property, which focuses on the natural right to be granted ownership on self created ideas – rationale, which has thus a first order type of justification in favor of intellectual property rights (and against the public domain) – the starting point of the economic paradigm is a market failure of public goods, which in the case of information and ideas is also a public production mean. The economic rationale for intellectual property rights and against the public domain is, therefore, a second order justification. In other words, the first step is to examine whether such a market failure does exist; a separate issue is the desirable remedy to correct this failure.

With regard to the remedy issue, it ought to be emphasized that establishing intellectual property rights is only one possible remedy for this type of market failure. Central production of information and ideas, direct sponsoring of these activities in the form of research institutions and universities and liability or other sort of legal rights (not necessarily propriety) are alternative solutions. This seems

34. Elkin-Koren, 'Exploring Creative Commons: A Skeptical View of a Worthy Pursuit', *see* p. 325 in this volume.

to be a trivial point, but a closer look at the existing literature shows that it is not so. Each of these remedies has advantages and disadvantages. For example, while direct government funding of creation bears the risk of carrying a hidden or explicit political agenda or, more broadly, the risk of endangering democratic and liberal values, intellectual property rights have the danger of limiting production means and of functioning in a counterproductive way, thereby constraining the frontiers of intellectual production.

Direct subsidies from the government for creation activities, instead of granting intellectual property rights, will generate a greater public domain. Intuitively, it seems that economists ought to prefer intellectual property rights to government owned creation activities or subsidies, because the former will be traded in markets and therefore their value will be determined by market forces. If no free market activity in ideas and creations takes place, how will we be able to determine how much creation to finance, how many subsidies to give and to whom? This is not such a trivial issue. First, as explained above, in order for intellectual property to be traded in markets, these rights must be initially defined through central intervention. This definition itself is not a result of free market activity, and of course it will have a decisive impact on the future market outcome regarding the actual objects of the rights. By contrast, granting subsidies for creation can be done on the basis of competitive variables, and the end product of these activities – the actual physical products and services which are the result of creation activities – will be traded in markets and therefore generate much more competition than the trading of intellectual property protected products and services that are monopolized by their holders. Indeed, most basic research is funded with no direct connection to its market value and patents usually do not cover such value. However, we are witnessing, in recent decades, increasing attempts by research institutions to commodify their research products, which of course leads to the shrinkage of the public domain. As will be explained below, this sort of patent extension cannot be easily justified by economic analysis.

Liability rules are another possible remedy to the public goods market failure in information and ideas. Calabresi and Melamed[35] highlighted the distinction between the question of whether to allocate at all an entitlement to information and ideas and that of the desirable form for their protection. They set the framework for choosing between property and liability rules. The choice, according to their model, should depend on the structure of transaction costs. For example, the entitlement to your own ideas can be protected by property rules that prohibit others from making use of these ideas, or by liability rules that do not ban such use, but entitle the creator to sue for compensation.

Which of the two remedies is more desirable? According to Calabresi and Melamed, property rules should be preferred when negotiation costs are lower than the administrative costs of an enforcement agency or a court determining the value of the entitlement. In such a case, central intervention ought to be minimal, since

35. G. Calabresi and D. Melamed, 'Property Rules, Liability Rules and Inalienability: One View of the Cathedral', 85 *Harvard Law Review*, pp. 1089-1128 (1972).

following the construction of the legal rule, the parties are likely to negotiate for the efficient end result, adhering to or bypassing the rule. Entitlements will change hands through a voluntary exchange in the market, where the government's sole function will be to prevent bypassing of the market through injunctions and criminal law. The persons who hold the entitlement are protected by a property rule, granting them a right of injunction, which prohibits the injurer or user from causing them any harm. Liability rules should be preferred when the cost of establishing the value of an initial entitlement by negotiation is higher than that of determining this value by an enforcement mechanism. In addition, liability rules might be preferred in order to avoid bargaining costs. Lack of information or uncertainty as to the cheapest means to avoid costs is likely to point us, according to Calabresi and Melamed, in the direction of liability rule as well. Liability rules involve additional central intervention by a state organ deciding on the objective value of the entitlement. In this case, if the creator has the entitlement, she has the right to be compensated, but she cannot prohibit others from using it.

One of the features of information and ideas is the uncertainty as to their value and their possible change of value over time. Granting property rights in informational goods means that speculators can make a fortune by purchasing them for a modest price and then enjoying huge profits on their future market value. In addition, in contrast with tangible goods and real estate, it is sometimes very difficult to locate the owners of intellectual property. The costs of trading intellectual property can be very high, as Lessig[36] illustrates, for example, in relation to the process of rights clearance necessary before any artistic creation based on various previous creations, can be launched. Informational goods, as we mentioned, are non-rivalrous, and this means that granting monopolistic property rights on them might be less efficient than enabling everyone to use them, subject to appropriate compensation paid ex post. Liability rules can, therefore, become interesting competitors of traditional intellectual property rights. Using them means an enhancement of the public domain, because those who want to use the entitlements protected by them cannot be prohibited; they just have to pay for the use.

In any case, the crucial point here is that central production, subsidies and liability rules, in the context of economic analysis, should be viewed as substitute remedies to the market failure of public good of information, and thus it is not clear at all that universities and other publicly funded R&D institutions should enjoy the same intellectual property protection. The fact that Universities rank very high in the statistics of patent applications and patent revenues is inconsistent with economic analysis. In other words, government funded research and information production should not enjoy the same intellectual property protection as private enterprises – individuals or firms. Likewise, intellectual property protection ought to be regarded as excluding liability protection. Consequently, the use, for example, of the doctrine

36. L. Lessig, 'Coase's First Question', 27 *Regulation*, No. 3, 38-41, 2004.

of unjust enrichment in cases where intellectual property was available, cannot be justified.[37] Such a law and economics view will enlarge the public domain.

5. SOME HIDDEN ASSUMPTIONS OF THE TRADITIONAL LAW AND ECONOMICS ANALYSIS

The traditional tragedy of the commons and the incentives paradigms are constructed on the basis of several hidden assumptions, indeed presuppositions, in their justification for intellectual property and the right balance between intellectual property and the public domain. The new information environment requires to reveal these assumptions and to put them under a closer scrutiny. This is the purpose of this section. I will focus here on three issues, beginning with the background concept of the evolution of science and progress, continuing with the state of technology and concluding with the basic assumptions as to the individual, community and time.

5.1. THEORIES OF PROGRESS AND THE EVOLUTION OF SCIENCE

The incentives framework, as we have seen above, advocates for limited property rights in intellectual products. The justification for propertization of ideas originates from the need to generate enough individual incentives to create. The justification of limiting these rights (in scope, time and purpose of use) originates from the notion that more creation and more progress will be available if creators have a wider available source of previous creations, ideas, and data. This latter rationale is also one of the major arguments of those who advocate a greater public domain at the expense of intellectual property.

The implicit assumption behind this argument is that scientific progress and cultural progress are the result of cumulative knowledge and ideas. We can place another brick in the wall of progress, only if we have access to the layers that already exist and thus our contribution is placed on the top of the bricks placed by previous creators. This picture matches Francis Bacon's philosophy of progress and the evolution of science. Bacon (1561-1626) disputed the ancient philosophy of scientific and artistic progress, which believed that knowledge and progress are the result of either intuition (Plato) or revealing the concealed by ignoring the palpable or the obvious or the evident (Aristotle). Bacon in the *Treatise on the Proficience and Advancement of Learning*[38] argued that progress is not achieved by intuition but by cumulative study of the reality through experiments.

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37. N. Elkin-Koren and E. Salzberger 'Towards an Economic Theory of Unjust Enrichment Law', 20 *International Review of Law and Economics* 551-573 (2000).
38. F. Bacon, 'The Advancement of Learning', Excerpted in Bizzell and Herzberg (eds.), *The Rhetorical Tradition*, Boston, Bedford, 1605/1990, pp. 625-631.

In 1962, Thomas Kuhn published his influential book on the *Structure of Scientific Revolutions*[39] in which he coined the modern use of the term 'paradigm'. Kuhn disputed the Baconian theory of the evolution of science. He argued that scientific research is conducted within a set of presuppositions and assumptions, which are taken as given (what is in fact admittedly done by the science of economics). This framework, dubbed by Kuhn 'paradigm', sets also the research agenda, directs resources and guides the recruitment of personal to conduct research. But the accumulation of results, which negate the pre-supposed framework, leads, from time to time, to the collapse of the paradigm and its replacement with an alternative one. Thus, scientific knowledge is not in constant state of progress and its advancement is not steady and continuous. Kuhn denied that he is a relativist, but two decades later the Post-Modernist movement took Kuhn's views to the extreme and argued that there is no objective truth or value. Post-Modernist claims began with analysis of the arts, but continued with analysis of history, law, language, and indeed the exact sciences.

While Bacon's perception of progress fits well in the incentives framework and especially in the considerations in favor of limiting intellectual property rights on behalf of the public domain, accepting Kuhn's or Post-Modern premises ought to question whether a reach and wide public domain is indeed a contribution to progress, or that such a domain actually reinforces the strength of current paradigms in both culture and science, delaying the emergence of new innovative ideas which contradict conventional wisdom.

In this context, the possible differences between post-modern insights and Kuhn's insights might be of relevance. If Kuhn is not a relativist (as he himself argued in a later addition to his book), then one must interpret his theory of the evolution of science as pointing in the general direction of progress; each paradigm is an improvement of previous ones. In that case, paradigmatic shift ought to be institutionally encouraged. Social and legal environments, which ease such shift, should be preferred to alternative ones, which make it more difficult to shift paradigms. It can be argued that in the context of the debate between intellectual property and public domain, therefore, Kuhn's analysis should not support equivocally the latter. If research is conducted *tabula rasa*, then the chances of the emergence of new and contradicting theories are greater, and thus the fixing of established views is larger. In this case, it can be argued that limiting access to existing ideas in form of a strong intellectual property regime does not work against progress, as it encourages constant fresh and unconventional thinking.

This is not the case, however, if we interpret Kuhn as a relativist, or if we adopt a post-modern view of progress. Here, the conclusion might be that the choice between a strong intellectual property regime and a strong public domain does not matter to the likelihood of progress, as progress cannot materialize in any case. It can be also argued that if these views (in both variations) of scientific progress are accepted, then the same applies to the cultural and artistic world. A strong public

39. T. Kuhn, *Structure of Scientific Revolutions*, Chicago, University of Chicago Press, 1962.

domain would have delaying effects on new fashions, new artistic schools, etc., if change is not desirable as such.

To sum up, the conventional economic analysis of intellectual property and its desirable scope, and hence of the desirable size of the public domain, presuppose a Baconian description of the evolution of science and by derivation, the same type of evolution of culture. Under different theories of evolution of science, such as Thomas Kuhn's, we might negate the basic rationales of the economic analysis. In this framework, the purpose of my discussion was mainly to raise the issue. A more thorough analysis of these questions is much needed.

5.2. THE STATE OF TECHNOLOGY

The question of the role of technology and its place within the law and economic models is connected to the debate on the evolution of science, but is not exactly identical. In this context, I would like to highlight one aspect of technology vis-à-vis the economic analysis of intellectual property and the public domain – its status as exogenous or endogenous variable. An old controversy among scholars who study the evolution of science and technology relates to the nature of technological change. On the one hand, one can find a rather deterministic view, which perceives technological advances as provoking economic changes, and thereby transforming social institutions. Even if this is not stated explicitly, this view believes in technological determinism, perceiving technological progress as independent, governed by its own internal logic and moving ahead due to scientific breakthroughs and maturity of accumulated data. This view can correspond to Bacon's view of the evolution of knowledge.

On the other hand, one can find scholars who hold that technology does not have any meaning in itself. Its emergence is not merely the outcome of technological plausibility, but rather depends on an interplay between technological ability and other social and economic factors. Thus, mass production, for example, could be viewed as an inevitable outcome of the economy of atoms, but could also be attributed to major demographic changes during the 20th century, which led to population explosion, and created the 'masses'. The notion of the 'masses' affected both political theory, and the concept of the self, which, in turn, created a need for mass-produced goods. Technology addressed that need. In other words, technology does not only affect new paradigms, but assumes, reflects, serves, and indeed results from them.[40]

Traditional law and economics models take the state of technological development as given or as exogenous to their analysis of the law. They do not give adequate consideration to the possibility of technological progress and, moreover, to the way technology changes as the result of the economics and legal environments. Technology is actually absent from the economic analysis in two senses: first, as a dynamic parameter that may affect efficiency, and second, as one of the outcomes of applying

40. Elkin-Koren and Salzberger, *supra* note 9.

certain legal rules. Obviously, technological advancements affect efficiency. That is because the state of technology determines the availability and costs of technological devices that, for example, are employed to reduce harmful consequences, which, in turn, establishes who would be the least cost avoider. Similarly, technology substitute legal measures, including private property, on the one hand, and the structure and dynamics of the public domain, on the other hand.

The state of technology and especially the pace of technological change are relevant, for example, to Demsetz' analysis of the creation of property rights and to Coase's analysis of protection of entitlements.[41] They were not taken on board by these two giants probably because the pace of technological change was very slow (relative to today) when they offered their analyses, and they thought that the evolution of technology is not likely to change significantly as a result of the choice of legal rules. This is not the case with the new digital information environment, where technologies are constantly evolving and the results of Demsetz or Coasian analysis may be different with each technological state of the art. The pace of technological change is disputable and there are many ways to measure it. Some believe that the speed of the chip, which currently doubles every two years, is a good measure of technological change. A common assumption in the high-tech environment is that technology reinvents itself every six to twelve months, and that employees must keep up with this rapid pace. This very brief timeframe and the elasticity of technology, call for special consideration in the analysis.

The crucial shortcoming of the traditional law and economics analysis when applied to the new information environment is that it takes technological development as static. It overlooks the interdependency and reciprocity between technological developments and legal rules. This multi-layered relationship between law and technology is a key factor for understanding technological innovation in the information environment. Thus, an analysis that takes the state of technology as an exogenous component suffers from a serious shortcoming when applied to an environment with rapid technological advances and innovations. The analysis also fails to consider the effect of legal rules on technological progress.

Coase's main insight is that in a world with no transaction costs the legal rules do not matter because if a rule (or its absence) is inefficient, individuals will negotiate and reach an efficient equilibrium.[42] The same conclusion can be attributed to Demsetz who shows how property rights evolve. They will be negotiated only if their absence is inefficient and vice versa – inefficient property regime will be the basis of contractual change. However, this analysis assumes that the costs for a self-help mechanism (like building a fence around a piece of land which can prevent everyone from entering and enjoying the fruits of the land) is fixed and is higher than the cost of creating a legal rule and enforcing it. Likewise, it assumes that each of the parties is in an equal position to advance technology as the result of the legal rule

41. R. Coase, 'The Protection of Social Cost', 3 *Journal of Law and Economics*, 1-44 (1960).
42. Ibid.

The ability of one party to efficiently prevent harm (Coase) or prevent entry (Demsetz) depends on the availability and costs of preventive measures, namely technologies that may reduce or eliminate harm altogether or prevent entry altogether. Yet, the availability of these technological advancements and their costs are treated by Coase and by Demsetz as fixed variables. Coase asserts that in a world of zero transaction cost it does not matter if the polluting factory has the entitlement to pollute, or that the neighbors have the entitlement to clean air. If the entitlement allocation is inefficient it will be contractually changed. However, the harm of pollution depends on the quality of filters, and the chances of technological improvements of the filters are different when the entitlement is allocated to the factory and when it is allocated to the neighbors, as the availability of the factory to invest and upgrade the quality of the filters is not equal to the availability of the neighbors.

Technologies are not the result of nature or the necessary sole outcome of scientific progress. Scientific progress depends on investment in R&D, which in turn is likely to hinge on the legal regime and specific legal rules regarding property and liability. States of technology, therefore, cannot be regarded as independent factors and should not be exogenous to the analysis. Indeed, the availability of certain technologies is contingent upon various socio-economic factors, of which law is a primary one.

If we require that the steam engines of railway companies release less sparks (Coase), we create a demand for more effective devices. Such a demand is likely to attract more investment in research and development of better devices and to stimulate competition among developers and producers. Large investments and high levels of competition are likely to increase innovation in spark-reducing measures and push down the prices of such devices. If legal rules under-protect intellectual property then, technologies are likely to develop which will restrict access or use. In the new information environment some programs may simply prevent the creation of uncompensated copies by using digital rights management systems (DRMs). Using encrypted platforms, owners may technically prevent the creation of digital copies, permit printed copies, or restrict any access or copying whatsoever.

DRMs can constitute a new regulation, applying original norms that depart from the legislated copyright laws, thus substituting existing copyright laws as a normative source. But DRMs may also function merely as enforcement mechanisms for existing rules, making them more efficient. If the hardware and software adopt the legislated rules, they will prevent copying or charge for copying whenever copyright protection is granted by statute, and allow it according to the exemptions specified in the law, e.g. fair use. In this case, the technologies are merely an enforcement mechanism of law enacted by traditional law-making institutions. However, if DRMs limit copying when the legislation permits it, technology both created a new legal regime and at the same time provides means to enforce it. The distinction between the two courses is not always easy to identify and analyze, as the rules codified in the technological platforms are not explicit and not transparent as are legislated rules.

The availability of certain technologies is not determined by the law of nature. It is a parameter affected by various factors. Law is one of them. Whereas rights

assigned by law may not affect efficiency in the absence of transaction costs, legal rules may do so by shaping the types of technologies that become available and their cost. By failing to make technology endogenous to the analysis, traditional economic analysis overlooks the reciprocal relationship between legal rules and technological progress.

This shortcoming in the traditional Coase-Demsetz analysis might not have been significant in the physical world. Indeed, the technologies relevant to Coase's examples about trains and sparks, as with regard to Demsetz' example of hunting among Native Americans, were not likely to change significantly as a result of the choice of legal rules. This oversight could be crucial, however, in the new information world, characterized by a great pace of technological change, or where technology is said to reinvent itself every few months. Information technologies are dynamic and constantly changing, and the results of Coase or Demsetz analysis may be different with each technological state of the art. It is more feasible today, therefore, that the choice of substantive legal rules regarding creation and protection of entitlements would have a crucial effect on those technologies likely to be developed in the short, medium, and long term.

5.3. The Arena – the Definition of Communities, Individuals and Time

The two traditional law and economics models to analyze intellectual property, as all the traditional models of the economic approach, make important assumptions regarding the individual, the community and territory. The incentives model seeks to find the intellectual property arrangement in which the total welfare of the community is maximized. More propertization is desirable as long as the marginal gains from propertization reflected by more creation is higher than the losses from the fact that these creations are not available for free, i.e. are not in the public domain. The point in which the gains equal the losses is the optimal state of propertization and thus also of the size of the public domain. Notwithstanding the measuring problem, there are two important variables which must be defined in order to be able to calculate gains and losses – the community for which this calculation is made and a time framework for these calculations. We elaborated on them in section 3.

Likewise, the tragedy of the commons explanation for the establishment of property rights assumes that individuals will engage not only in individual actions (within or bypassing markets), but will also benefit from collective actions, like the creation of legal rights and their enforcement. The economic approach, as liberal theories from Hobbes to Rawls, views the state as the most important collective organization or institution, and presupposes that markets correspond to states, which are basically territorial units. A social contract, or another form of collective action, is carried out by citizens of a specific territorial unit, which becomes a state or another form of a national unit.

In Demsetz' original analysis, which focused on natural resources like hunting land, oil or waters, it was sensible to define the community on the basis of territory.

This is not the case with intellectual property and a public domain of ideas. Likewise, the implicit assumption of the incentives model that the unit of maximization ought to be the state (as it advocates intellectual property laws enacted by the state) is far from being self-explanatory. Ideas cross territorial and political boundaries. Intellectual property markets are global. Intellectual community activities are a-territorial.

The implication of the borderless nature of ideas on economic analysis is highly significant. One can no longer take the state as the relevant framework for market activities, for decision-making calculus or for institutional analysis. This change is significant in both the normative and positive domains. Thus, while traditional normative law and economics analysis take the state as the basic maximization unit, which has implications on the definition of externalities and the analysis of other market failures, this cannot be the case in the new information environment. Likewise, positive economic analysis is trickier, again because the identification of markets is less straightforward than in the physical world.

The implicit territorial assumption can be best demonstrated by patents and the pharmaceutical market. When one can distinguish between states in which new medications are developed and states which are only the consumers of medications, maximization of welfare will lead to totally different property protection of patents and, by derivation, different sizes of the public domain in the two types of entities. As a result, a rule that reflects global efficiency will be yet a different one. When collective action is required but only possible within the state's framework while its effects are global, we can expect increased rent seeking and social choice problems, which will distort an efficient rule even in the context of the state's community. Until the economic models establish a defendable definition of communities for which maximization is justified, the models will be analytically defective.

Another variable that ought to be defined in order to conduct maximization of welfare, wealth, or utility is a time framework. The definition of time is less acute when economic models analyze responsibility rules for physical harm or criminal law. It is very significant when dealing with a propriety regime and especially when we analyze intellectual property. The whole incentives concept is constructed upon the idea of seeds that are expected to blossom in the future. A more affluent public domain is meant to benefit the community not (only) in the present, but (mainly) in the future. What is then the right time frame for such a calculation? A decade? A generation? Taking into account the next generation? Again, the economic models do not have a coherent concept of the most justifiable time framework and this fact is a serious flaw in their ability to serve as a normative framework for the analysis of the public domain.

The third important variable, which constructs the basis of law and economic analysis, is the individual. Most models assume that individuals are rational physical entities and each has a fixed set of preferences or a utility function, which is exogenous to the object analyzed by the model. In other words, these preferences are pre-fixed and do not change as the result of deliberation and interactions within and outside the relevant market. Two major points can be highlighted in context of this fundamental presupposition. The first relates to the definition of the individual

in the new information environment; the second is connected to the debate between liberal and republican theories of the state.

The new information environment transforms not only the notion of collective communities, but also that of the individual, who is the basic unit for liberal philosophy of the state and for economic analysis. In the non-virtual world the basic unit of reference – the individual – is one person with a single identity, passport or drivers' license number, a specific address and distinct physical features. In the new information environment, the atomistic unit of analysis is a username with a password and an electronic address. There is no strict correlation between the Cyberian individual and non-virtual individual, as the same physical individual can appear on the Internet as several entities, each with different identification features and a different character, belonging to different communities. While conventional economic thinking, perceives individual preferences in the non-virtual world as exogenous to the political process and to the economic markets, the new information environment requires us to internalize even the analysis of individual preferences.

Conventional economic analysis assumes that our basic identity, which can be framed in terms of various sets of preferences, is the result of distinguished historical, cultural, linguistic, and even climatically different backgrounds.[43] Those background factors are pre-given and predate any formation of markets and collective action organizations, such as states or other national units. The definitions of state boundaries, however, are very much influenced by these ancient groupings of preferences. Even if preferences change as the result of market interactions, such as successful marketing and advertising, they are initially founded upon these ancient differences, some of which are presumably almost permanent.

Intellectual property, especially in the new information environment can be viewed as threatening this perception, because it blurs historical, cultural, national, and even climatic boundaries. The decline of some of the more physical attributes of online users is accompanied by the pervasive effect of information technologies on processes such as individuation and will-formation. The online information environment constitutes the human condition of our time. The comprehensive character of the online environment makes individuals more vulnerable to external effects that shape their preferences. The emergence of media, communications, and software multinational conglomerates and the rise of new monopolies not only affect economic competition in the market for ordinary goods, but also affect individual autonomy. As phrased by Barber,[44] the new monopolies are particularly insidious because while monopolies of the nineteenth century were in durable goods and natural resources, and exercised control over the goods of the body, new information-age monopolies of the twenty-first century are over news, entertainment, and knowledge, and exercise control over the goods of the mind and spirit. Power exercised by private economic agents is relevant for the formation of preferences. Powerful market players that

43. Montesquieu, *The Spirit of Laws*, Berkeley, University of California Press, 1977 [1748].
44. B. Barber 'Globalizing Democracy', 11 (20) *The American Prospect* (2000), online: <www.prospect.org/print/V11/20/barber-b.html>.

control the means of producing informational goods are better positioned to express their own agendas and thereby marginalize diversity.[45]

When power accumulated in the market is used in the public sphere, it tends to distort equal participation and reduce fair access to participation means. Informational goods, such as news and data, but also photo images, music, novels, comics, or computer programs reflect an ideology, and may shape ones identity and preferences.[46] Informational products affect their own demand. Consequently, centralized power in such a marketplace could be very powerful in shaping preferences and agendas and reducing plurality, as well as social and political diversity. Individuals in the online environment are therefore cut off from their historical, cultural, and geographical context, on the one hand, and widely exposed to a relatively homogenous information environment, which affects their preferences, on the other hand. Indeed, a globalized market for goods could benefit from a relatively homogenized body of consumers, consuming goods under fairly standard interoperable settings. We are in an interim stage of Cyber-revolution. In the future, the Internet may cause the disappearance of diversity, which in the non-virtual world fosters the definition of the unique self, leaving us with a brave new homogenous human being.

If this description is true it also blurs the distinction between intellectual property and the public domain. The romantic view of the public domain portrays the individuals there as freer and more independent. But the effect of relaxing the rigid assumption regarding pre-fixed individuals interacting with each other applies not only to intellectual property markets, but also to the public domain. If our identities are shaped by the global information we consume and the global interactions with others, the public domain can be seen as captured by the same forces which capture our markets, affecting, in this manner, our freedom.

The second point concerning the perception of the individual in the traditional law and economics modeling is somehow related, but focuses on the normative vantage point. Liberal thinking, on which most law and economics models are based, views markets and collective decision-making institutions and processes as aiming to aggregate pre-fixed individual preferences. Republican thinking emphasizes the need of the desirable political community to have not only technical mechanisms of preferences aggregation, but also a more substantive content to the public sphere, which enables real deliberation and participation by all individuals. The republican view rejects the notion that the democratic scene is a competitive marketplace of ideas that must be kept free so it can best reflect the aggregated choice of citizens. Political institutions, according to the republican view, shape public discourse, and thereby affect preferences.

Preferences are considered a by-product of a political process that takes place in the public sphere and are shaped by deliberation or sometimes by the inability to deliberate. The way public discourse is structured affects the way individuals

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45. Barber, *supra* note 44; and Netanel N. 'Cyberspace Self-Governance: A Skeptical View from Liberal Democratic Theory', 88(2) *California Law Review*, 395-498, 2000.
46. B. Barber, 'Jihad Vs. McWorld, How Globalism and Tribalism Are Reshaping the World'. New-York, 1995.

develop their ideas, shape their positions, identify their interests, and set their priorities. Preferences do not exist prior to the deliberating process, but are rather the output of political processes. Institutions and processes which are based on individual participation and responsibilities, it is argued, are likely to shift self-centered individual preferences into more public-regarding preferences. This latter republican idea is reflected by Rousseaus' distinction between the general will and the sum of individual wills or preferences (although it is doubtful whether Rousseau would agree to this interpretation of his political theory).

From the republican perspective, the way information markets are structured is of great importance for shaping preferences, since preferences are not prior and exogenous to the political process, but rather an output of that process. Processes in the public sphere should be given a broad understanding to include all discursive will formation processes that take place in our cultural life.[47] The new information environment facilitates more opportunities for individuals to undertake an active part in the public sphere. While public discourse in the pre-Internet age was facilitated exclusively by the mass media, online exchange allows more individuals to directly communicate with each other. The low cost of communication provides individuals with more affordable access to news, large databases, and cultural artifacts. Digital networks further affect the quality of participation in the public sphere, enabling interactivity and facilitating more active involvement.

Participation is no longer limited to passively consuming television shows and editorials of major newspapers. There are increasing opportunities to speak out and actively take part in online debates, by using talkbacks, posting ones own positions and analyses in online forums, and challenging the views of others. The low cost of producing and distributing informational goods and the interactive nature of digital representation, allow individuals to participate in creating their own cultural artifacts, publish on their own Web pages, adopt fictional characters to reflect their own meaning of political agenda, participate in collaborative writing of online stories or report news to a newsgroup. Online discourse, therefore, opens up opportunities of transforming the structure of the public discourse from the mass media scheme of one-to-many, to a more decentralized, and more democratic many-to-many structure.

This republican vision, together with the new information environment has also the same blurring effects between intellectual property and the public domain. However, replacing the conventional law and economic assumption of fixed preferences with the assumption that preferences are endogenous to the economic and political markets, means that any intellectual property-public domain equilibrium under the traditional assumption has to shift towards a greater public domain under the republican law and economic analysis. Such a shift is Pareto superior as preferences are expected to change towards more altruist, more cooperative nature, which means that utility or wealth frontiers can be extended.

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47. N. Elkin-Koren, 'Public/Private and Copyright Reform in Cyberspace'. 2(2) *Journal of Computer Mediated Communication* (1996), available at: <jcmc.indiana.edu/vol2/issue2/>.

To sum up, traditional law and economics models presuppose fixed, varied and exogenous individual utility functions or sets of preferences. Relaxing this presupposition is likely to blur the distinction between intellectual property and the public domain and tilt the equilibrium in favor of a greater optimal public domain.

6. PROPERTY RIGHTS AND THE PUBLIC DOMAIN REVISITED

So far the analysis in this chapter, implicitly assumed that property rights, including intellectual property rights, are the antonym of the public domain and that the distinction between the two is dichotomous – a thing (land, tangible, music, book, idea) can be either propertized or in the public domain. In this section, I will try to show that this is not necessarily the case, and in particular that (1) propertization does not necessarily lead to the shrinkage of the public domain, and (2) that a dichotomous line connects property right and the public domain, rather than create a dichotomy.

Let me begin with some formalistic categorization, which may assist us in the analytic definition of the public domain. The antonym of private property includes all the things that are not privately owned. These can be divided into things that cannot be owned, things that are owned by the government, the state or some other ruling entity, things that are owned in common (*jus publicum*) and things that are owned simultaneously by everyone, or open access regimes (*res nullius*). The difference between the two last categories is that under common ownership any decision regarding the thing has to be reached by the collective through some kind of decision-making process, while with *res nullius* everyone can make use of the thing or reach a decision regarding the thing as they like. Many scholars objecting to the commodification trend and advocating the perseverance of a rich and extensive public domain implicitly assume that the commodification process transfers things from common ownership or from *res nullius* to private ownership. However, the main features of the commodification trend is not the shift from common property or from *res nullius* into private property, but a shift from things that in the past could not be owned to objects of property. In this sense, there is no direct link between commodification and the shrinkage of the public domain.

Moreover, under this broad definition of the objects of property, the public domain can, in fact, expand with the creation or usage of private property. Consider, for example, the most typical example of privately owned property – land. Let us assume that the government changes the designation of particular common land into private property, this piece of land is subsequently purchased by an individual on which she builds an architectural masterpiece. This new building is privately owned in the sense that no one can enter the building, use it, sell it, or eliminate it save its private owner or under her permission. But the pleasure of viewing the building for the rest of the community, the inspiration it creates, its contribution to future architectural plans can be regarded as an enlargement of the public domain. So does the enhanced economic value of properties in the neighboring vicinity. The new

architecture masterpiece can be the source of new ideas in architecture, the source of inspiration for poets and writers and in general a source of utility enhancement for members of the community and even the cause for an increase in the monetary values of the private properties of the neighbors. All these benefits cannot be claimed by the private owner of the new building, thus they are things which belong to the public domain. It is very possible that had this piece of land been kept in common ownership or declared *res nullius*, everyone would have made any physical use of it, but the total welfare or utility of the community would have been lower.

To put this idea differently, from a law and economics perspective (defined broadly on the basis of utility maximization or narrowly on the basis of wealth maximization), property rights are a mechanism to increase the total utility/wealth of the population and in this path we can resort to Demsetz and his externalities analysis of the emergence of property rights or to the incentives model, and portray the public domain as comprising also positive externalities from private property. The public domain, therefore, should not be regarded as the antonym of private property.

A second argument I would like to put forward is that between private property and the public domain, there is a dichotomous line rather than a dichotomy. The favorable reception of the first argument regarding the relations between private property and the public domain implies in itself that the second argument also holds, but I would like to add another angle to what was argued above. Property right, or ownership, is an established legal concept, but, in fact, this right is an abstract concept, which includes a bundle of particular rights related to its object. The five main components of private ownership are access, withdrawal, management, exclusion and alienation.[48] There is no obvious reason to consider automatically the whole bundle of rights in the context of the battle between property and public domain.

Indeed, the American courts' rulings regarding common resources, such as oil, gas, and public waters, developed a more complex allocation of rights. For example, courts ruled that, while individuals have the right to drill on their private property and that the retrieved oil is owned by them (although its source is a common pool below all the private properties around), they are not allowed to alienate the oil and will be liable for damages for doing so.[49] This ruling, in fact, creates a right that includes exclusive access and withdrawal, common management and no right to alienation. This is an exception to the general perception of full private property as a thick and integral concept.

It is possible that transaction costs were the main reason in the past not to break up the concept of property into its different components, or rather to group those rights under a common legal title in the first place. In the new information

48. E. Ostrom,'Private and Common Property Rights', II *Encyclopedia of Law and Economics*, 2000, online: <encyclo.findlaw.com/2000book.pdf>.
49. R. Epstein, *Takings – Private Property and the Power of Eminent Domain*, Cambridge, Mass., Harvard University Press, 1985, p. 221.

environment transaction costs are significantly lower.[50] More sophisticated and fine tuned enforcement measures are available thanks to innovative technologies. It might be an interesting exercise, which is beyond the scope of this chapter, to examine the justification of each of the component separately and its optimal degree of propertization. For example, the optimal duration of each of these rights might be different. While restrictions on access are the most heavy-handed measure vis-à-vis the implications on the flow of ideas and the sources for new creations, management, exclusion, and alienation are less harmful. On the other hand, from the point of view of the individual incentives to create, allowing greater access (for example by a wide definition of fair use) might pose a minor disincentive to create in comparison to allowing management or alienation.

The breakage of the full property right into different components is not only a normative analysis of the boundaries between intellectual property and the public domain; it can be analyzed in the positive level. Projects, such as Creative Commons, in fact, break the full private property right into sub-components, using contractual tools. Again, the decrease of transaction costs in the new information environment enables these developments. In law and economics' eyes, these developments point to inefficiency of the current legal arrangements, but the good news is that reduced transaction costs brings us closer to Coasian efficiency, in the shadow of the legal rules.

7. CONCLUSION

In this chapter I tried to show why the economic analysis of law is a useful framework to analyze the public domain in the context of the contemporary debate between its supporters and those who believe in greater commodification. On a positive level of analysis, law and economics can explain why we are witnessing changes in intellectual property rights with increased technological change, as is the case with the information revolution of the last decade. In this respect, Demsetz' tragedy of the commons framework can be a helpful model. However, public choice analysis can shed additional light on the contemporary changes and it predicts that the legislative and judicial decision-making will lead to non-optimal arrangements in favor of intellectual property rights and against the public domain. Positive law and economic analysis can also explain the various private contractual enterprises (such as Creative Commons), trying to bypass the legislative and judicial arrangements, especially in the light of public choice predictions that the official arrangements will be inefficient.

On a normative level, we focused on the incentives paradigm. We saw why according to the traditional analysis law and economics scholars should not be in favor of unlimited commodification and why the public domain has an important

50. N. Elkin-Koren and E. Salzberger, 'Law and Economics in Cyberspace', 19 *International Review of Law and Economics* 553-581 (1999).

function in the path to achieve efficiency. Law and economics, therefore, cannot be seen as a pro commodification movement and in comparison to deontological rationales, such as natural law, it advocates for a viable and meaningful public domain. However, we also focused on some of the traditional presuppositions in the traditional law and economic models, the relaxation of which can even shift the optimal solutions vis-à-vis the right balance between intellectual property rights and the public domain even further in the direction of the public domain. Such presuppositions are the definition of the relevant community for which we seek efficient rules, and indeed the assumption regarding individuals and their utility functions or preferences.

Finally, it was argued that the public domain is not the antonym of intellectual property rights. Expansion of intellectual property rights can lead to the expansion of the public domain and vice versa. More importantly, property is a bundle of rights which were traditionally treated in a unified framework due to high transaction costs of separation. However, the new technological revolution enables the separation of traditional property rights into its different components, allowing a more complex, yet more efficient, regulatory regime, which will also lead to a greater public domain. Many of this chapter's insights are only appetizers and require a more sophisticated study and elaboration. But if it prompts empirical research and theoretical discussion, its purpose would be well served.

Chapter IV

More or Better? Shaping the Public Domain

*Michael D. Birnhack**

1. INTRODUCTION

The battle over the continuous expansion of copyright law in the last decade takes place in several and sometimes overlapping fields. The issue is fought in Congress, in the popular media and in less-popular blogs, in courtrooms and in lengthy law review articles. History, constitutional and legislative texts, economics and justice are all part of the sophisticated discourse that has emerged from these (as yet undecided?) battles. Many ideas and concepts – some new and some renewed – have emerged from the debate over the contours of the legal right which enables an author (or owner) to control most of the uses of his or her work by others. One of the most interesting concepts that emerged is that of the public domain.

After the public domain was identified,[1] many authors struggled to define it,[2] map it,[3] locate its constitutional sources,[4] and explain its crucial role in copyright

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1. D. Lange, 'Recognizing the Public Domain', 44 *L. & Contemp. Probs.* 147-178 (1981). *See also* his updated thoughts on the subject: D. Lange, 'Reimagining the Public Domain', 66 *L. & Contemp. Probs.* 463-483 (2003).
2. J. Litman, 'The Public Domain', 39 *Emory L.J.* 965-1023 (1999); Y. Benkler, 'Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain', 74 *N.Y.U. L. Rev.* 354-445 (1999).
3. P. Samuelson, 'Mapping the Digital Public Domain: Threats and Opportunities', 66 *L. & Contemp. Probs.* 147-171 (2003).
4. D. Leenheer Zimmerman, 'Is There a Right to Have Something to Say? One View of the Public Domain', 73 *Fordham L. Rev.* 297-376 (2004).

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 59–86

law.[5] This important work poses a viable alternative to the pro-property or commodification of information alternative.[6] I shall call this academic endeavor the *public domain project*.

The *public domain project* juxtaposed the public domain with the commodification of information. The project reminds us that at least under an instrumentalist view of copyright law, the public domain is not merely – or rather should not be – an unintended byproduct, or 'graveyard' of copyrighted works, but its very goal.[7] I subscribe to this project and in this article will take it to be the baseline: copyright is one of the main tools aimed to create the public domain. This domain is a commons, owned by all and none, a resource which we can use without asking permission. It has a crucial role in personal self-development, learning, experiencing, imagining,[8] speaking with others, creating new works for the benefit of ourselves and wider circles, starting from the immediate interlocutor and up to the entire community. The public domain is the means and the end to 'promote the progress of science' (in the US Constitution's formulation), or for 'the encouragement of learning' (in the language of the Statute of Anne). It is where knowledge is created and where it lies awaiting new interpretations, new applications and new meanings. It is not a graveyard, but a playground for speech-experiments.

In the daily application of copyright law practitioners and courts naturally focus on the rights accorded to authors and their scope and hence the public domain is often viewed as the 'negative'. One of the main goals of those who are engaged in the public domain project is to 'reify the negative': only if 'it' has a name, an organizing concept, can it be part of the copyright discourse, and not its residue.[9] Once we accept that the public domain is not only a 'negative', we need to study its legal roots,[10] and more so, to figure out how we would like it to be constructed. 'We' in this sense, is 'we the people', for whom copyright law was designed. The public domain project geared up with definitions; it is inspired by theories of copyright law and its constitutional history. It should also be aware of various unintended consequences, such as its distributive affects.[11] These are the foundations. Constructing the public domain is a much-needed task and much of the scholarly work conducted in this field

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5. J. Boyle, 'The Second Enclosure Movement and the Construction of the Public Domain', 66 *L. & Contem. Prob*. 33-74 (2003).
6. For a critical analysis, *see*: N. Elkin-Koren and N. Weinstock Netanel (eds.), *The Commodification of Information*, The Hague, London, Boston, Kluwer Law International 2002.
7. L. R. Patterson and S.W. Lindberg, *The Nature of Copyright, A Law of Users' Rights*, Athens, University of Georgia Press 1991, p. 2.
8. J. Rubenfeld, 'The Freedom of Imagination: Copyright's Constitutionality', 112 *Yale L.J*. 1-60 (2002).
9. Boyle, *supra* note 5, at 69-74 (responding to E. Samuels, 'The Public Domain in Copyright Law', 41 *J. Copy. Soc'y USA* 137-182 (1993), at p.150 who asked 'what is gained by reifying the negative and imagining a 'theory' of the public domain?').
10. Zimmerman, *supra* note 4.
11. *See* A. Chander and M. Sunder, 'The Romance of the Public Domain', 92 *Cal. L. Rev.* 1331-1373 (2004) (observing that the pro-public domain scholars hold a romantic view thereof, and hence obscure its distributional consequences).

in recent years accumulates to form such a construct. In this article I would like to add my contribution to the public domain project. What kind of public domain are we interested in? I will be applying the notions of quality and quantity.

Before I flesh out some of the fuzziness of the twin terms of quality and quantity, I would like to draw a parallel of the commodification-public domain conflict: it is the conflict between copyright law and freedom of expression (or freedom of speech, or the First Amendment, which will all be used interchangeably). The conflict between copyright law and the principle of free speech is apparent to some, mostly to those who are engaged in the public domain project, but not to courts, especially not in the US. American courts have routinely rejected the argument that there is a conflict between copyright law and free speech.[12] This persistent rejection has accumulated into a denial of the conflict. In previous work I explored some aspects of the free speech/copyright law interface, including an attempt to find out why courts denied the conflict.[13] One of the explanations draws on a distinction between an *internal* and an *external* conflict. I argued that instead of claiming that there is no conflict, we should in fact identify two conflicts. One is between copyright law and freedom of expression, portrayed as a conflict between two separate legal fields, each deriving from distinct theories (and in some places, from distinct constitutional sources). This is the external conflict. The other is an internal conflict, within copyright law. It is the tension that lies and motivates the entire copyright scheme, at least under an instrumentalist view thereof: the conflict between the public's long-term goal of enhancing creativity and the individual author's short-term interest in maximizing his or her gains by executing control over the work. This is the internal conflict. Courts tend to mix the two, and especially they tend to internalize the external conflict into the internal one. One of the reasons they hang on in justifying the internalization is that both copyright and freedom of speech share the same goal ('*the shared goal argument*'), or as the US Supreme Court stated, 'copyright law [is] the engine of free expression.'[14] However, once free speech concerns are internalized, courts tend to downplay the role of free speech. This is one of the ways by which the (external) conflict is denied.

In our task of constructing the public domain, we need not ignore the knowledge we gained in political theory, namely, the elaborate political thought about freedom of speech. The public domain and free speech share the same goals.[15] In fact, I would

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12. *See* M. Birnhack, 'The Copyright Law and Free Speech Affair: Making-Up and Breaking-Up', 43 *IDEA* 233-298 (2003).
13. Id. 'Copyright Law and Free Speech after Eldred v. Ashcroft', 76 *S. Cal. L. Rev.* 1275-1330 (2003); 'Acknowledging the Conflict between Copyright Law and Freedom of Expression under the Human Rights Act', *Ent. L. Rev.* 24-34 (2003); 'Copyrighting Speech: A Trans-Atlantic View', in Paul Torremans (ed.), *Copyright and Human Rights – Freedom of Expression, Intellectual Property, Privacy*, The Hague, London, Boston, Kluwer Law International 2004, p. 37.
14. 'In our haste to disseminate news, it should not be forgotten that the Framers intended copyright itself to be the engine of free expression' – *Harper & Row v. Nation Publishers*, 471 U.S. 539, 558 (1985).
15. Zimmerman makes a convincing argument that the first amendment mandates the public domain. *See supra* note 4, at 325.

argue, they are two sides of the same coin.[16] In the public sphere, where the parties are the state and the citizen, we often assert the principle of freedom of speech and when we address the private sphere, we often turn to the market and the role of the public domain therein. But the two concepts – the public domain and the free speech principle – are very close to each other, even if their particular conceptions might differ.[17] This argument requires much elaboration, which I will not undertake here, but for a few rather dense comments. In a nutshell, both the public domain and the principle of free speech construct, or aim at constructing, a communicative sphere, where people can interact with each other in various circles, whether it is an interpersonal circle, a communitarian one or a wider political circle. In this sense, both the public domain and the idea of freedom of speech stem from the same source. They are both derivatives of a political notion, which is a particular conception of democracy. Both concepts are simultaneously liberal and social in nature, in that they attempt to facilitate the personal and political discourse, so to serve both the individuals who take part therein and the polity to which they belong. The public domain and freedom of expression vary in their legal meaning. The public domain allows a privilege to use expressive raw material, whereas the legal meaning of free speech is to provide the speaker with a negative liberty, which is not to be interfered with. Obviously, the assumption about the close connection of the public domain and the free speech principle can be debated. I would ask the reader to suspend the doubts, as I believe the argument that follows will reinforce this claim.

If, then, the public domain and freedom of speech share a close connection, in shaping the public domain we can learn from the sophisticated discourse on freedom of speech. Accordingly, there is no need to reinvent the wheel and it is useful to learn from the lessons of the free speech-copyright conflict (the external conflict) in our task of constructing the public domain, within copyright law. In this I take seriously the (American) judicial internalization of the conflict, which points to the shared goal of copyright law and of free speech theory. The public domain represents our free speech concerns within the realm of copyright law.

Back to the tools of the discussion that will follow: quantity and quality. These are fuzzy terms. At best, we would like to have a combination of both: we would like to construct a public domain that has more information and more speech of better quality. This is also true of most physical and virtual assets, such as our property. It is also true of more general political ideas, such as the market, whether that of goods or that of ideas. The terms 'quality' and 'quantity' are strange to the economic discourse, but I think they can be applied with some necessary modifications. In the

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16. I would further argue that the public domain is an off-spring of the idea of progress, which was a dramatic and lively idea during the eighteenth century, and thus served as part of the intellectual background of the American constitutionalization of copyright law. The idea of progress and the First Amendment also share a common intellectual cradle. For further discussion, *see* M.D. Birnhack, 'The Idea of Progress in Copyright Law', 1 *Buffalo Intellectual Property L.J.* 3-58 (2001).
17. Applying Dworkin's concept-conception distinction: R. Dworkin, *Law's Empire*, Cambridge (Mass.), Belknap Press, 1986, p. 70.

commercial market quantity is sometimes translated into 'growth' and quality is sometimes translated into efficiency. In the marketplace of ideas quantity is translated into volume of speech and quality is translated into the idea of a robust discourse, one that can produce the truth, or informed decisions of the polity. Each term can be applied in relation to various subject matters: to content, to speakers/authors, to listeners/consumers. There are related difficulties with these terms, such as who determines the quality and according to which criteria? As we proceed in our exploration, I shall try to unpack these variables.

However, in a world of limited resources, quantity and quality often find themselves on rival sides of the fence and are incommensurable. We must often choose whether we prefer the one at the expense of the other. In the context of information and speech, we often have to choose whether we want more speech at the expense of quality, or are we willing to settle for somewhat less ('how much less?') information, but of better quality.

The conflict between the 'more' or 'better', i.e., between quantity and quality, is not unfamiliar in close contexts such as the (old) media. Commercial television channels are driven by the need to sell as many advertisements as possible, and hence tend to adopt the content to fit the commercial atmosphere. As a result, many such channels tend to address the lowest common denominator, so as to attract as many viewers as possible. In other words, they give up quality, so as to attract quantity. We end up with 500 channels, and nothing to view.[18]

In the pages that follow, I examine how quality and quantity interact first within the free speech theory and then within copyright law. Recall that free speech has a close relationship to the public domain. Hence, the external copyright law/free speech conflict is mirrored within copyright law by the commodification/public domain conflict. Free speech theory includes various strands, some of which presuppose or implicitly endorse either quality or quantity. To the extent that these variables conflict with each other, each of the various strands has a preference as to which is preferable. This preference is extended to the public domain. Copyright law, in as much as it is understood to reflect a market-based theory prefers quantity and expresses a disbelief in quality. This preference is instrumental: quantity, so the supporters of the competitive market argue, will produce quality. The latter cannot be promoted on its own.

The table is now loaded with complex concepts: copyright law, the public domain, commodification of information, and also freedom of speech. The task of this chapter is to sort these out, so to learn how we can construct the public domain in the best possible manner. This article will proceed in the following way: the next section discusses free speech jurisprudence in order to figure out whether its basic principles prefer (either explicitly or implicitly) one of the above discussed variables

18. The applicability of antitrust law to the media market reflects this trade-off. *See Associated Press v. U.S.*, 326 U.S. 1 (1945), and contemporary discussion: D. McGowan, 'Why the First Amendment Cannot Dictate Copyright Policy', 65 *U. Pitt. L. Rev.* 281-338 (2004) (arguing that the First Amendment does not limit Congressional discretion in enacting copyright law).

to the other. The third section will undertake the same mission regarding copyright law. The fourth section will tie the conclusions from the previous two sections.

2. SPEECH: MORE OR BETTER?

This section explores the underlying and hidden assumptions of the free speech principle to the variables of quantity and quality, under various theories of free speech. The conclusions will serve us later in defining the public domain, which we are constructing.

2.1. TWO PARADIGMS OF THREATS TO SPEECH

Free speech is considered to be a fundamental human right. It is listed in most constitutions of liberal democracies and even if not enumerated it is nevertheless recognized and protected.[19] The paradigmatic understanding of the principle of free speech is the governmental one: it is considered to be a shield in the hands of the citizen in the face of a censorial government. It is a somewhat romantic view, but it is still a valid one. There are numerous theories that offer explanations for this fundamental human right. Some focus on the individual, others on the polity. Some focus on a particular value (tolerance, for example)[20] or a social interest (letting steam off).[21]

However, limiting the First Amendment to the governmental paradigm would be unjustifiably narrow.[22] Many now realize that free speech is threatened not only by governments, but by private entities as well. Call this the *corporate paradigm*. When in a remote town there is only one newspaper, one radio station and one TV station and all are owned by the same person or corporation, then the principle of free speech in that town is likely not to deliver, even though the government does not interfere. If most users use Google to find out the best item in the ocean

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19. *See* e.g., in Australia: A. Mason, 'The Australian Constitution in Retrospect and Prospect', in R. French, G. Lindell, C. Saunders (eds.), *Reflections on the Australian Constitution*, Annandale, The Federation Press, 2003, 7, at p. 9 and in Israel, where the right to free speech is read into the enumerated protection of human dignity. *See* e.g., H.C. 2481/93 *Dayan v. Chief Commander of Jerusalem Police Department*, 48(2) P.D. 456, 480.
20. L. C. Bollinger, *The Tolerant Society*, Oxford, Oxford University Press, 1986.
21. *See* T. I. Emerson, *The System of Freedom of Expression*, New York, Random House, 1970, p. 7. Freedom of speech is more than a legal rule. It deeply affects the political culture of a given society. It defines the private and the public spheres: the citizens' sense of liberty, and the political discourse. Hence, we may say that the principle of free speech has an educational role, and a historical one too. But these are all other parts of the story.
22. This would be repeating at least one of the *Lochner* sins: we should not immunize the 'private' realm from scrutiny just because it regulates the relationships between citizens, rather than the relationship between the government and citizens. There is nothing novel in this view: this is how the Supreme Court explained its interference in the question of libel, in *New York Times v. Sullivan*, 376 U.S. 254 (1967).

of online information, but Google eliminates some items due to their content,[23] or changes the PageRank of some sites,[24] then free speech is endangered, even though the government did not tell Google what to do or not to do. When library patrons' choice of access to information is limited by technology designed to filter 'obscene' or 'indecent' material, then free speech is not fully accomplished.[25]

Unlike the *governmental paradigm*, the *corporate paradigm* is not always conceived as an issue of free speech. This is especially so with our American friends.[26] The sources of this focus on the state and the refusal to view market-based limitations as a problem of free speech requires a research of a different kind – a historical, social and cultural one, and I will not attempt to do so here. Those who focus on the first, governmental paradigm, designate the government a limited role: it should not interfere and if it does, it should be in an indirect manner aimed to achieve other goals,[27] or be narrowly tailored to serve a compelling government interest.[28] Free speech is portrayed as the counterpart of the Hohfeldian duty not to interfere: it is the right not to be interfered with. Free speech is thus a negative right.[29]

Those who are not obsessed with the idea that the government is the only source of all evil, search for threats to the principle of free speech everywhere. They offer a much richer concept of free speech. Once they identify a threat to speech, they wish to amend it, no matter whether the threat emanated from the state or from a private entity. The solution might be to take various measures and one of these is governmental interference. Under this model the government is designated an active role. It might be called upon to amend market failures. This can be in the form of antitrust laws, preventing one corporation from controlling all informational outlets in a community or creating a public forum, or supporting public, non-commercial broadcasting. It might be in the form of imposing limitations on campaign financing,

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23. *See* D. McCullagh, 'Google Yanks Anti-Church Sites', *Wired* (March 21, 2002), available at <www.wired.com/news/politics/0,1283,51233,00.html> (Google removing links to anti-Scientology sites upon copyright infringement notification, under the DMCA); or *see* Google's explanation for not removing anti-Semitic results for the search 'Jew': <www.google.com/explanation.html>.
24. *Search King Inc. v. Google Technology, Inc.* (W.D. Ok., 2003).
25. *See* Children's Internet Protection Act (CIPA) and *U.S. v. American Library*, 539 U.S. 194 (2003). *See also* M.D. Birnhack and J.H. Rowbottom, 'Shielding Children: The European Way', 79 *Chi.-Kent L. Rev.* 175-227 (2004).
26. N. Weinstock Netanel, 'Copyright and a Democratic Civil Society', 106 *Yale L.J.* 283-387 (1996).
27. This idea is reflected, for example in the American distinction between regulation of speech and regulation of behavior. The Supreme Court developed a test to identify the regulation which aims at the behavioral parts of an act, even though it might affect the speech elements therein. *See United States v. O'Brien*, 391 U.S. 367 (1968). Examples are flag burning (*Texas v. Johnson*, 491 U.S. 397, 404 (1989) and recently functional code (*Universal Studios Inc. v. Corely*, 273 F.3d 429 (2d Cir. 2001)). This distinction has yet to respond to the Speech Act theory of Austin.
28. *See* e.g. *Ashcroft v. American Civil Liberties Union*, 124 S.Ct. 2783 (2004).
29. Applying Berlin's terms: I. Berlin, *Four Essays on Liberty*, Oxford, Oxford University Press 1969, p. 118.

or imposing mandatory rights of access, as in the fairness doctrine which used to be part of the American landscape, but was later abolished.[30]

The two paradigmatic views of free speech and of the government's role – the *governmental paradigm* and the *corporate paradigm* – correspond to different conceptions of free speech. The next sub-section will explore various conceptions of free speech, in order to find out their underlying assumption or bias towards the variables of quantity and quality.

2.2. First (Amendment) Principles

This is neither the place nor there is a need to rehearse and survey the numerous free speech theories.[31] Accordingly, what follows is a modest attempt to figure out how the quality/quantity dimension acts within the main relevant theories. Roughly speaking, free speech justifications can be divided into two groups: those that view the ideal of free speech as an end and those that view it as a means to achieve another goal.

The various theories that focus on the individual speaker, which belong to the first group of justifications, are less relevant here, as they view the importance of speech and of maintaining a regime that protects the freedom to speak, in the actual act of speaking.[32] Whatever speech a person finds to be beneficial to him or her should be protected. Rodney Smolla captured this idea eloquently, in writing that 'the self-realization that comes from speech is qualitatively different from other forms of pleasure-seeking', and the difference is that 'the fulfillment that comes from speech is bonded to man's capacity to think, imagine and create.'[33] Accordingly, what matters is that everyone who so wishes can speak. The quality of the speech is measured only according to the speaker and never on the basis of its content. Content is a matter to be determined by the speaker. Furthermore, the overall quality or quantity of the speech is simply a matter for other considerations, not for the theory of free speech as offered by these scholars. Accordingly, the discussion that follows focuses on the second group of justifications, those that view the principle of free speech in an instrumental manner.[34] These are the 'Search for the truth' theory, associated with John Stuart Mill; 'self government of the sovereign people', a theory associated

30. *See Syracuse Peace Council v. FCC*, 867 F.2d 654 (D.C. Cir. 1989).
31. *See generally* F. Schauer, *Free Speech: A Philosophical Enquiry*, Cambridge, Cambridge University Press, 1982; K. Greenwalt, *Speech, Crime & The Uses of Language*, Oxford, Oxford University Press, 1989, pp. 9-39; W. Sadurski, *Freedom of Speech and Its Limits*, Deventer, Kluwer Academic Publishers, 1999.
32. Ed Baker focuses on 'expressive liberty', and argues that the state is required to respect the person's autonomy. For his discussion in the context of the copyright-speech relationship, *see*: C.E. Baker, 'First Amendment Limits on Copyright', 55 *Vand. L. Rev*. 891-951 (2002).
33. R.A. Smolla, *Free Speech in an Open Society*, New York, Knopf, 1992, p. 10.
34. Later on I will juxtapose some theories of free speech with some theories of copyright law, but will omit the deontological theories. This does not mean that under these conceptions of either legal field there is no conflict; to the contrary. *See* Baker's analysis, *supra* note 32. However,

with Alexander Meiklejohn, and contemporary theories, which rely on theories of democracy and celebrate participation and/or deliberation.

2.2.1. The Search for the Truth

This pervasive rationale of free speech is committed to the quantitative dimension: it strives to assure that every speaker and every expression enters the marketplace of ideas. Quantity here refers both to speakers and to content of speech. This commitment, though, is instrumental. It is the best way, so the theory holds, to produce the best *quality* of speech, measured by one criterion only – the truth.

The origins of the 'search for the truth' theory, often referred to as the 'marketplace of ideas' theory, is outlined in John Stuart Mill's famous essay *On Liberty*,[35] though credit belongs to John Milton.[36] It is the argument about the ability of the marketplace of ideas to produce the truth. Mill established it on the fallibility of decision-makers-especially the state, which might misjudge the truth to be false.[37] Instead of the government, only the market can produce truth. Freedom of speech marks the line between the market and the government and forbids the latter to cross that line. Thus, the principle of free speech is an instrument to achieve truth.[38] The

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the task here is to examine the construction of the public domain under the quality-quantity parameters.

35. J. Stuart Mill, *On Liberty* 5-9 (1869), Knoxville (Tennessee), Wordsworth Classics, 1996. The location of the argument in an essay on liberty has caused some confusion. Only one comment of Mill ties speech to liberty. He notes that silencing an opinion 'is robbing the human race' (id. at 19). For a discussion of this point, *see* C. Edwin Baker, *Human Liberty and Freedom of Speech*, Oxford, Oxford University Press, at p. 285.
36. *See* J. Milton, *Areopagitica* (1640), Santa Barbara, Bandanna Books edition, 1992, at pp. 20, 32, 42. Milton's argument, however, was aimed at licensing only, i.e., pre-publication restraints only. Post-publication punishment did not raise any problem in his view. *See* id. at pp. 43-44.
37. Mill, *supra* note 35, at 20-36. Other reasons are that even erroneous opinions might contain a portion of truth (at 46), that truth requires the false opinion as a background for sustaining itself (at 36) and that without a background of false opinions, the truth might become dogmatic (at 40).
38. This rationale has been criticized on several grounds. One critique is that truth is relative and not objective. A possible answer to this is that whatever the market produces is the truth. Schauer notes that this answer begs the question, for it does not explain why it is this process that is preferable (*supra* note 31, at 20). Sunstein makes a similar point: C.R. Sunstein, *Democracy and the Problem of Free Speech*, New York, The Free Press, 1993, p. 25: If the process leads to an objective truth – Sunstein asks how exactly the process occurs. If it creates (a relative) truth, he asks for a description of the preconditions of a market which would be capable of so doing. Another possible answer is that 'the value that is to be realized is not in the possible attainment of truth, but rather, in the existential value of the search itself' – W.P. Marshall, 'In Defense of the Search for Truth as a First Amendment Justification', 30 *Ga. L. Rev*. 1-39 (1995), p. 4. A second critique of the rationale is skeptical of the marketplace's ability to produce the truth, especially in the short-run. *See* Schauer, *supra* note 31, at pp. 19-20, 26. This is especially so in the face of historical examples, which show how falsity prevailed for a long and horrible time. *See* Bollinger, *supra* note 20, at p. 54.

Millian rationale was incorporated into US free speech jurisprudence in Justice Holmes' famous dissent in *Abrams v. United States*:[39]

> 'But when men have realized that time has upset many fighting faiths, they may come to believe even more than they believe the very foundations of their own conduct that the ultimate good desired is better reached by free trade in ideas – that the best test for truth is the power of the thought to get itself accepted in the competition of the market, and that truth is the only ground upon which their wishes safely can be carried out.'

The rationale is pervasive in cases where the government wishes to regulate speech. The marketplace demands a free flow of information without any imposed inhibitions. It should be a place of pure laissez-faire. The rationale is indifferent to the *quality* of the speech. This indifference is deliberate. It derives from the skepticism in government's ability to distinguish true from false: Government cannot determine 'good speech' or 'bad speech'. This is one of the sources of the American constitutional doctrine of content-neutrality.[40] In a 1994 case, the Supreme Court stated that –

> 'Laws of this sort [content-based regulation, M.B.] pose the inherent risk that the Government seeks not to advance a legitimate regulatory goal, but to suppress unpopular ideas or information or manipulate the public debate through coercion rather than persuasion. These restrictions 'rais[e] the specter that the Government may effectively drive certain ideas or viewpoints from the marketplace."'[41]

Of course, those who hold this view are likely to be interested in having a better public discourse, but they deliberately blind themselves to the content of the speech and its qualitative aspect. The marketplace, they believe, will produce the truth and hence the better quality of the discourse.

One result is that the marketplace of ideas allows repetitions of speech. The government would not be entitled to silence someone, or prefer one speaker to another based on the fact that the second speaker's speech has already entered the marketplace. Once speech is involved, i.e., an idea, the government is prohibited from interfering with it. The reason is, again, the infallibility of the government: it is not for the government to say whether an idea as uttered by A is the same as the idea uttered by B. This has an obvious implication for copyright law.

It is also clear that for the market to function better, we should be interested that *all* the opinions and ideas that strive to take part in it will find their way inside.

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39. 250 U.S. 616, at p. 630 (1919).
40. *See* G.R. Stone, 'Content Regulation and the First Amendment', 25 *Wm. & Mary L. Rev*. 189-252 (1983).
41. *Turner Broadcasting System, Inc. v. Federal Communications Commission*, 512 U.S. 622, 641 (1994), quoting *Simon & Schuster, Inc. v. Members of the New York State Crime Victims Bd.*, 502 U.S. 105, 116 (1991). *See also R.A.V. v. City of St. Paul*, 505 U.S. 377 (1992).

So the rationale is interested in maximizing the *quantity* of speech. Barriers on access to the marketplace of ideas should be removed. But note, it is a marketplace of *ideas*. Accordingly, the rationale strives to recognize *ideas* and distinguish them from non-ideas. Any asserted speech that is not an 'idea' does not contribute to the emergence of truth and thus is unworthy of the protection guaranteed by the First Amendment.[42]

Interestingly, the metaphor of the 'marketplace of ideas' is so often used, that we do not pause to question it. Once we do, it is obvious that it reflects the quintessential commodification of information: it applies the competitive market theory, a-la Adam Smith, to intellectual products.[43]

2.2.2. Democracy

A second public-oriented rationale for freedom of speech aims even more directly at the political realm than the marketplace of ideas rationale. It is the understanding that free speech is crucial for maintaining – at least – and assisting in nurturing and flourishing – at most – democracy. Once understood as an inseparable part of democracy, the question becomes, what is the best conception of democracy? Obviously, this is a fundamental issue of political science. For our purposes here, I shall examine two main answers: a majoritarian conception of democracy and a deliberation-participation conception.[44]

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42. This is a categorical approach to the subject matter of free speech, articulated by the Court in *Chaplinsky v. New Hampshire*, 315 U.S. 568, 571 (1942). The Court listed a few categories of expressions, and explained: 'such utterances are no essential part of any expression of ideas….' The full list of the 'low level' speech includes 'the lewd and the obscene, the profane, the libelous, and the insulting or "fighting words"' – id. In other words, the marketplace rationale tries to separate ideas from non-ideas. This attempt is well illustrated in the area of obscenity. For sixteen years the Court struggled to define 'obscenity': *Roth v. United States*, 354 U.S. 476, 484 (1957) defined an expression as obscene if it is 'utterly without redeeming social value'. But *Miller v. California*, 413 U.S. 12 (1973), redefined obscenity (a definition which is still valid today – *see Reno v. American Civil Liberties Union*, 521 U.S. 844 (1997)). *Roth*'s test was replaced with 'Whether the work, taken as a whole, lacks serious literary, artistic, political or scientific value'. The 'utterly without' value was replaced with the less rigid demand of 'lacks serious value'. The result is that more material is considered obscene under *Miller*, than under *Roth*, and if obscene – it is not an 'idea', and not protected by the First Amendment. Justice Brennan, who delivered the opinion of the Court in *Roth* dissented in this case as well as in a companion case, and frankly admitted giving up the task of defining obscenity. *See Paris Adult Theater v. Slaton*, 413 U.S. 49, 83-84 (1973).
43. *See also* Schauer, *supra* note 31, at 19-20.
44. Emerson bundles the two together, when he speaks of 'participation in decision-making by all members of society' – *see supra* note 21, at 7. Both versions find an authoritative anchor in Brandeis' concurrence in *Whitney v. California*, 274 U.S. 375 (1927) at p. 375.

Self Government

The first to articulate a coherent and influential theory of free speech based on a democratic concept was Alexander Meiklejohn.[45] His basic premise was the principle of self-government: it is 'We, the People' that govern, and government derives its powers from the consent of the people.[46] This notion of the people's sovereignty should be understood on the background of the alternative: ruling by monarchs, aristocrats and other non-elect rulers.[47] This notion of self-government finds support also in James Madison's words:

> 'A popular government without popular information or the means of acquiring it, is but a prologue to a farce or a tragedy, or perhaps both. Knowledge will forever govern ignorance; and a people who mean to be their own governors, must arm themselves with the power knowledge gives.'[48]

Based on this premise, Meiklejohn explained the principle of free speech and modeled it after the New England Town Meeting.[49] The meeting is open to all: 'every man is free to come. They meet as political equals.' It convenes to discuss

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45. *See* A. Meiklejohn, 'Free Speech and its Relation to Self-Government' (1948), reprinted in *Political Freedom: The Constitutional Powers of the People,* New York, Harper Brothers Publishers, 1948. The rationale has had great influence on American free speech jurisprudence. Justice Brennan's opinion for the Court in *New York Times*, 376 U.S. at 270-271 enriched us with the observation/command, that free speech cases should be considered 'against the background of a profound national commitment to the principle that debate on public issues should be uninhibited, robust, and wide-open.' Against this background, the Court affirmed the right to criticize public officials. This was recognized as an almost literal incorporation of Meiklejohn's thesis: *see* H. Kalven, *A Worthy Tradition: Freedom of Speech in America*, New York, Harper & Row, 1988, p. 67. In a subsequent case, the Supreme Court stated that '[f]or speech concerning public affairs is more than self-expression; it is the essence of self-government.' – *see Garrison v. Louisiana*, 379 U.S. 64, 74-75 (1964). Justice Brennan himself hinted that *New York Times* echoes Meiklejohn's theory – *see* W.J. Brennan, 'The Supreme Court and the Meiklejohn Interpretation of the First Amendment', 79 *Harv. L. Rev*. 1-20 (1965), p. 18. *See also* Justice Thomas' dissent in *Nixon v. Shrink Missouri Government PAC*, 528 U.S. 377 (2000) (affirming *Buckley v. Valeo* and its permission to restrict contributions to political campaigns). He writes that 'The founders sought to protect the rights of individuals to engage in political speech because self-governing people depend upon the free exchange of political information. And that free exchange should receive the most protection when it matters the most – during campaigns for elective office.' – id. at p. 917.
46. Meiklejohn, *supra* note 45, at pp. 9-19.
47. *See* C. Sunstein, 'Free Speech Now', 59 *U. Chi. L. Rev.* 255-316 (1992), pp. 256-257. In this sense, it is akin to the eighteenth century's cry for equality: the French citizens who took over the Bastille in the name of 'liberty, equality and fraternity.' For them, 'equality' meant self-government, not equality among people in the way we interpret the Equal Protection clause of the Fourteenth Amendment today.
48. *The Writing of James Madison*, New York, G. P. Putnam's Sons, 1910, vol. 9, p. 103.
49. Meiklejohn, *supra* note 45, at p. 24. This model and the extent to which it is applicable to the vast and populous modern state is one ground of critique of this theory. *See* Schauer, *supra* note 31, at p. 38, 43.

political issues and to reach decisions on public policy.[50] This is a political arena, and its final aim is 'the voting of wise decisions.'[51] Freedom of speech is required to assure the effectiveness of the process, so that the governed/governing citizens are informed ('they must know what they are voting about').[52] Without freedom of speech the political process will fail.

Much can be said (and indeed, has been said) about this rationale, but here we are interested in the dimension of quality/quantity. The purpose of the town meeting and of the political process in Meiklejohn's view is to produce an informed decision. Naturally, we would be interested that the political process produces the best possible decision and we may assume that a prerequisite for the best decision is having the best information possible and the best views heard. Hence, the rationale declares a clear interest in the *quality* of the public discourse. We may further assume that diversity enables various ideas to be tested – a notion borrowed from the marketplace of ideas rationale – and so the self-government rationale is interested also in the *quantity* of the speech.

Meiklejohn's interest in the quality of the political debate was not translated into a clear prescription. He wrote that the government can, and 'has a heavy and basic responsibility to promote the freedom of speech', but this is by means of education, by providing information and the like,[53] not by direct intervention. There seems to be only one place where the self-government rationale is more willing to intervene, but Meiklejohn did not say how this intervention can or should be carried out. This is the case of repetition. The self-government rationale resents repetitions. A town meeting – or a political process – would be better off if ten people expressed ten different views, rather than expressing the same idea ten times. Meiklejohn called such a repetition a waste of time, and explained that, 'what is essential is not that everyone shall speak, but that everything worth saying shall be said.'[54] This resentment towards repetitions reinforces the interest in the quality of the debate, even at the expense of disappointing some speakers who have nothing new to say. It is a preference of quality to participation. But again, Meiklejohn did not clarify if this resentment to repetitions allows interference to stop them.

2.2.3. Participation

Contemporary theories of democracy build on Meiklejohn but hold a deeper or wider notion thereof. Our understanding of democracy might include more than self-government that is exercised by the casting of a ballot. We might understand

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50. Meiklejohn, *supra* note 45, at pp. 24-26.
51. Id. at p. 26. Later on, Meiklejohn reaffirmed his emphasis on the electoral aim of the process. *See* id. at 97 (1960) (citing Art. I, § 2, cl. 1 of the Constitution).
52. Id. at p. 26.
53. Id. at pp. 19-20.
54. Id. at 26.

the political process as a 'collective self-determination'[55] or as a 'deliberative democracy.'[56] This is the view that self-government in a democracy is composed not only of the momentary act of voting, but also of what happens in between elections; that the ongoing civic life is one of constant decisions, public-political and private-individual acts. A further central notion of democracy – if not the most important one – is political equality.[57] This is not just the equality of citizens in the sense that no king rules the people and it is also more than Meiklejohn's statement that the process is open to all. It is political equality in the sense that 'the identity, the resources and the power of the speaker do not matter',[58] but what matters is only 'the force of the argument.'[59]

This richer content of what we mean by 'democracy' has direct implications on our current exploration. Once we are interested in the process of deliberation for its own sake, as an end and not just as an instrument aimed at producing better political decisions, the concern for the *quality* of the discussion is paramount. This conception of democracy declares a more explicit and vigorous interest in the *quality* of the discourse than the rationales we have seen thus far. Once we further insist on the relevance of political equality, we cannot ignore the fact that some markets, sometimes, malfunction.[60] The markets are controlled by powerful speakers, who silence, de facto, less powerful speakers. The richer conception of democracy allows governments to interfere in the marketplace of ideas in such situations, with the goal of improving the *quality* of the discourse.[61]

Such interference of the government in the marketplace of ideas is an anathema to the Millian rationale of free speech. The Millian objection is even stronger when the governmental interference means that the speech of some speakers is limited. The Millian rationale does not care whether the limitation of *quantity* is meant to enhance the *quality* of the debate. Thus, the participatory theory's preference of quality of the public discourse to the quantity of speech in the marketplace of ideas needs explanation and justification. One route is to convince us that the participatory conception of democracy is better than the alternative of a majoritarian conception,

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55. O.M. Fiss, *The Irony of Free Speech*, Cambridge (Mass.), Harvard University Press, 1996, p. 3.
56. For a discussion of this idea and its shortcomings, *see* J. Bohman and W. Rehg (eds.), *Deliberative Democracy – Essays on Reason and Politics*, Cambridge (Mass.), MIT Press, 1999; Sunstein, *supra* note 38, at pp. 18-20.
57. *See* J. Lichtenberg, 'Foundations and Limits of Freedom of the Press', in Judith Lichtenberg (ed.), *Democracy and the Mass Media*, Cambridge, Cambridge University Press, 1990, 102, at p. 111.
58. Sunstein, *supra* note 38, at p. 20.
59. Id., at p. 245.
60. For an economic analysis of the protection of free speech, *see* D.A. Farber, 'Free Speech Without Romance: Public Choice and the First Amendment', 105 *Harv. L. Rev.* 554-583 (1991) (arguing that in the absence of legal protection for free speech, the market will under-produce information, and government will over-regulate it).
61. *See* e.g., Fiss, *supra* note 55, at pp. 15-17 (arguing that 'The call for state intervention is based … on the theory that fostering full and open debate – making certain that the public hears all that it should – is a permissible end for the state.')

which is, by and large, the conception underlying Meiklejohn's theory of free speech. Such a task exceeds the scope of this chapter.[62]

An interest in the quality of the debate might justify taking active measures to enhance the quality of speech even at the expense of limiting the quantity of speakers. But does this mean that the interest in quality overcomes the interest in quantity? This last question is illustrated by examining the case of repetition. Repetition seems to enhance quantity, not quality. So if we are more interested in the quality of the discourse, would we allow people to repeat each other's speech?[63] Under a participatory understanding of democracy, the answer should be positive. Participation is valued per se. Quantity, translated into democratic values, means citizens' participation by way of speech. Judith Lichtenberg advocated that free speech requires both quantity of speech and diversity, and captured it nicely in the phrase 'multiplicity of voices.'[64] How would this view respond to a situation of scarcity, when, for the sake of simplicity, only two people can voice their views, for some technical reason, but there are three people who wish to speak, two of which wish to express the same idea? Who should govern: quality or quantity? It is important to notice that *quality* in this situation refers to speech, whereas *quantity* refers to speakers. But once we switch the latter element (quantity) to refer to speech too, then it is clear that quality precedes quantity.

The idea that the state can, and indeed does have a role in improving the marketplace of ideas is not foreign to us: copyright law does exactly that. It is where the law deliberately interferes by providing incentives to produce original expression. In this sense, copyright law is indeed the engine of free expression.[65] It is therefore time to turn to copyright law.

3. EXPRESSION: MORE OR BETTER?

Is there a match between copyright law's preferences in regard of the quantity/quality variables and that of free speech jurisprudence? Before we can address this question, we need to briefly explore copyright law. This area of the law (together with other forms of intellectual property and no doubt other legal inventions) is the source of the threat to the informational public domain and perhaps it is also the place where a cure can be found.

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62. R. Dworkin offers such an explanation, through an analysis of the problem of campaign finance and *Buckley v. Valeo*, 424 U.S. 1 (1976). *See* R. Dworkin, 'Free Speech and the Dimensions of Democracy', in J.E. Rosenkrantz (ed.), *If Buckley Fell: A First Amendment Blueprint for Regulating Money in Politics*, New York, Century Foundation Press, 1999, p. 63.
63. Dworkin argues that the approach he advocates (the '*discriminating approach*') demands that the 'debate is exposed to the widest variety of *ideas* possible; it is not also necessary to maximize the sheer quantity of speech.'
64. *See* Lichtenberg, *supra* note 57, at pp. 113-114.
65. *See supra* note 14.

How does copyright law fare in this setting? Does it aim at the 'more' or at the 'better'? At this early point, a series of questions arise: What is 'quality'? Who determines 'quality'? Can it be measured? How? And what about the quantitative aspect? Does copyright law prefer more? More authors or more works? The answers matter.[66] An initial (and hence superficial) observation is that copyright law prefers quantity to quality. Indeed, students of copyright law learn that the quality of the work is irrelevant to the copyright protection. A three-year old child's drawing is protected just as much as Picasso's paintings. The difference will appear in that the first is unlikely to attract much interest other than that of the proud parents and if copied is unlikely to end up in court. But this does not mean that copyright law is indifferent to the quality of the works. Some copyright law theories are interested primarily in quality and quantity is only a means to achieve it, while other theories emphasize quantity and yet other theories are indifferent to either criteria of our examination.

Once again, the responses to the questions posed here lie with first principles. The following is inevitably a rough and instrumental sketch of some of the familiar theories of copyright, with a singular focus – it aims at exploring its quality/quantity preferences thereof. In the course of this journey, I will take a detour to examine the preferences of the 'competitive market' view to these variables.

3.1. AUTHOR-BASED THEORIES

One branch of copyright theories focuses on the individual author. Various and sophisticated arguments claim that an author deserves to own the creation of his or her mind due to this personal, psychological connection between the author and the child of her or his mind.[67] The Lockean theory, as applied to intellectual property claims that the labor the author invested in the raw material makes the author the owner of the outcome, since the labor is an extension of the persona, which is now embodied in the new work.[68] These author-based theories view copyright as a particular case of property, which in turn is interpreted to be a strong, libertarian human right. These theories are usually affiliated with the Continent, where they

66. Paul Goldstein writes: 'Decisions about the scope of copyright's subject matter and the reach of its rights will inevitably affect the quantity, quality, and cost of future literary and artistic works – and whether in the future, there is anything on [television] that is worth watching.', *See* P. Goldstein, *Copyright's Highway: The Law and the Lore of Copyright From Gutenberg to the Celestial Jukebox* New York, Hill and Wang, 1994.
67. G.F.W. Hegel, *Philosophy of Right*, [T. Knox (ed. and trans.), Oxford, Oxford University Press 1967], §44; M.J. Radin, 'Property and Personhood', 34 *Stan. L. Rev.* 957 (1982).
68. John Lock, *Two Treatises of Government – The Second Treatise* (1690) §25 [Peter Laslett (ed.), Cambridge, Cambridge University Press, 1988, at pp. 285-286]; W.J. Gordon, 'A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property', 102 *Yale L.J.* 1533 (1993), A.C. Yen, 'Restoring the Natural Law: Copyright as Labor and Possession', 51 *Ohio St. L.J.* 517-559 (1990).

are reflected in positive law, such as the doctrine of moral rights. However, our discussion here, is limited in its scope and is rather simple too.

These rationales are indifferent to the quality/quantity dimension: they do not concern themselves with their outcome beyond the reward to the author. Quality and quantity are not at all understood to be a goal of copyright law. Rather, it is the author who is located at the center of the legal attention, and whatever she creates is worth protection (assuming the conditions of the relevant theory are met, such as mixing labor etc.), no matter whether it enhances the quality of human knowledge or just the quantity thereof. In other words, quality and quantity are relevant only to those justifications of copyright law that are instrumental – those justifications that view copyright as a means to achieve a goal, even if the latter is debated.[69]

3.2. Instrumental Views of Copyright: The Economic Analysis

The economic analysis is familiar to students of copyright law: it begins with the nature of creative works as public goods, adds that as long as the cost of copying is cheaper than the cost of creating the original work and in the absence of a technology which can fence out potential copiers – the work will be copied. An author whose work was copied once, or assumes it might happen, may be hesitant and possibly unlikely to produce a second work, or any at all. When this occurs it is considered to be a market failure. The law is interested in promoting the creation of intellectual works, usually a goal taken for granted and not spelled out, other than in the famous US Constitutional clause ('Congress shall have the power … to promote the progress of science …'.) Accordingly, the law should intervene to amend the market failure. It does so by providing authors, or more precisely copyright owners, with adequate incentives.[70] This analysis assumes that a proprietary control is the best incentive and that authors are motivated (at least *inter alia*) by financial interests.[71] The immediate result of such a theory is an internal tension within copyright law between the author who is awarded control over her work and the public, for whose sake the incentive mechanism was put into place in the first place.[72]

Other strands of the economic analysis focus not on preventing potential unauthorized uses of the copyrighted work, but on the flip side of this story. Creative works are considered to have a positive externality: some of them are worth far

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69. This means that if and when these theories are juxtaposed with the deontological theories of free speech, and to the extent that there is a conflict between them, the conflict is external rather than internal. This is closer to the European situation than to the American one. *See Copyrighting Speech*, *supra* note 13.
70. W.M. Landes and R. Posner, 'An Economic Analysis of Copyright Law', 18 *J. Legal Stud.* 325-363 (1989).
71. Cf. S. Breyer, 'The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs', 84 *Harv. L. Rev.* 281-355 (1970).
72. *See* Birnhack, *Copyright Law and Free Speech*, *supra* note 12, at p. 1292.

beyond the cost of production. The benefits of a work are difficult to measure: how much is Shakespeare's work worth to humankind? The right created by the law and vested with the author intends to enable the author to internalize at least *part* of this positive externality.[73] A further strand offers the familiar economic analysis of (real and all other kinds of) property: in order to facilitate transactions between people, a prerequisite is that the asset at stake can be separated from others, defined, evaluated and is transferable.

There are ongoing debates about the meaning of the economic analysis, its (lack of) empirical basis, its underlying assumptions, and its implications: how should the general theoretical framework be translated into particular legal rules? For example, what does it imply as to the optimal duration of copyright protection?[74] Here we focus on two variables: quality and quantity. The economic analysis, however we articulate it, creates incentives for producing new works and is indifferent to the use of the works thus produced. In this sense, it is looking for the best incentives to produce *more* works. It seems, then, that the quantitative dimension is more important than the qualitative one. But can we say that this rationale is indifferent to the quality of the works?

The answer is negative. Copyright law, under its economic analysis, does have a strong preference for the qualitative dimension. Various copyright law mechanisms are applied to make sure that the works created are *different* from each other. Difference, it is submitted, serves as a proxy of quality.[75] The whole point of the incentive theory is to prevent the duplication of the *same* works (and this includes works that are considered to be 'substantially similar'). Repeating someone's expression without their permission undermines their financial rewards and undermines their incentives to create intellectual works in the first place. So the market view strongly objects repetitions of expression.[76] The preference is apparent in various copyright law doctrines, most clearly in the requirement of originality and the doctrine of substantial similarity. As for originality, some jurisdictions settle for a technician's labor, others require that the origin of the work is to be found with the author rather than someone (or something) else, and some require creativity.[77] However

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73. Cooter and Ulen summarize this idea: 'Granting exclusive property rights to the creator of an idea allows him or her to appropriate much of its social value'. *See* R. Cooter and T. Ulen, *Law & Economics*, 3rd ed., Reading (Mass.), Addison-Wesley, 2000, p. 128; *see also* W.J. Gordon, 'Excuse and Justification in the Law of Fair Use: Commodification and Market Perspectives', in Elkin-Koren and Weinstock Netanel, *supra* note 6, at p. 149.
74. *See Eldred v. Ashcroft*, 537 U.S. 186 (2003), especially the dissenting opinion of Justice Breyer.
75. This is clearer in patent law, and especially the novelty and non-obviousness requirements.
76. It does, however, allow repetition of ideas. This distinction reflects the idea/expression dichotomy. Repetitions of expressions are allowed only under the fair use defense, which makes sure that the use is socially beneficial.
77. *See University of London Press, Ltd. v. University Tutorial Press, Ltd.*, [1916] 2 Ch. 601 (UK); *Feist Publications, Inc. v. Rural Telephone Service Company, Inc.*, 499 U.S. 340, 345 (1991) (US); *Telstra Ltd. v. Desktop Marketing Systems Ltd.*, [2001] FCA 612 (Melbourne, 25.5.01) (Au.).

we interpret the requirement and its theoretical underpinnings, it is meant to assure that the work at stake is different from other works. A new work means not only that there are more works (which on its own would be a quantitative measure), but that it enriches the creative sphere. However, even once we accept that quantity is a proxy for quality, this does not necessarily imply that quality is improved. The task of so determining is left to the market. Since the economic analysis aims at creating a better functioning market, this would be a good point for a short detour and for addressing the more general question: How do markets respond to the variables of quantity and quality?

3.3. MARKETS

Do markets prefer 'more' or do they prefer 'better'? What does it mean to have a better market? These questions might sound somewhat obscure to the (Chicago/ Milton Friedman) trained (capitalist) economist. Whatever an efficient market produces is the optimal quality. And as to quantity – we are likely to hear the same response – whatever the efficient market produces is the optimal quantity. In other words, the view which holds the ideal of a perfectly competitive market, places its cards on the efficient market. Of course, this is an unsatisfactory response, on both its prongs. Efficiency needs to be defined as well. Whatever criteria we choose to define these terms will have an underlying, even if hidden, assumption as to quality and quantity.[78] Let us inquire this line of thought.

3.3.1. Quality

Quality is something, which cannot be pre-determined. Whatever the market produces is good. This is the slogan of the economist. The point at which supply meets demand determines the price of the product, and determines the product. It might not be the best, in terms of the product's properties: there might be an easier-to-use product, or a safer one, or a more durable one, but production costs, and hence price, would be much higher. The costs would be too high to meet the demand curve, and hence the product would not be supplied, or would be supplied only to the few who can afford the high price. Think of cars: technological knowledge today enables the production of much safer cars that will provide better protection of their passengers. Cars might be easier to use. But to produce such a car would cost more than most can afford. In addition, our preferences, risk aversion and the alternatives also determine the price we are willing to pay. So we settle for a cheaper car, which is not as safe as it should be and perhaps not as easy to use, but it is one that is affordable and preferred choice amongst the various options. The economist would say that this is the quality that

78. The normative underlying assumptions of economics, especially when applied to the law, were the subject of fascinating exchange some 26 years ago. *See* articles in 9 *J. of Legal Stud.* (1980) and 8 *Hofstra L. Rev.* (1980).

the market settled for and as long as the market forces were not manipulated (as in the case of a price cartel between manufacturers), this is the only 'quality'.

In other words, the market as such is indifferent to quality.[79] It might be, as it often is, that the government interferes with the market and requires certain levels of safety by way of setting standards. The market then internalizes this requirement and adjusts accordingly. However, we could explain this interference by the government in setting minimal standards as a correction of various market failures. Individual users lack the ability to evaluate the potential risks of certain products or to obtain the relevant information. Many, even when informed about the risks, under-evaluate them due to cognitive failures: we tend to appreciate the 'here and now' much more than the 'probable' and 'futuristic'.

The traditional law and economic analysis is trained to identify market failures and to offer amendments,[80] but it instructs us not to interfere with an un-failed functioning market. This implies that economic theory and hence economic analysis is neutral. This would of course be a flawed conclusion. Efficiency can be defined in various ways, some of which are incompatible with each other. These definitions reflect assumptions and claims about interpersonal comparisons, rationality of agents, distributive justice, about the possibility and desirability of quantifying that which is unquantifiable or need not be so and other assumptions.[81] Consider for example the Pareto optimum criteria of welfare. It instructs that changes are efficient only if at least one person is better off and no one is in a worse position. Even though its initial appeal was that it eliminates interpersonal comparisons, it was later understood that it does exactly that, for example when a policy change will make one person slightly worse off and many others tremendously better off.[82] This results in comparing the minor loss of the one person to the potential gains of the many others.

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79. No wonder, then, that economics textbooks lack a definition of quality. 'Quality' is thus often associated with product quality. *See* e.g., R.S. Pindyck and D.L. Rubinfeld, *Microeconomics*, 3rd ed., Englewood Cliffs (NJ), Prentice Hall Inc., 1994, p. 594, or the terms defined in J. Black, *A Dictionary of Economics*, Oxford, Oxford University Press, 1997, p. 383 ('quality control', 'quality ladder.')
80. *See* S. Breyer, *Regulation and Its Reform*, Cambridge (Mass.), Harvard University Press, 1982, pp. 15-35. Does traditional economic analysis apply to the digital environment? Compare the analysis of C. Shapiro and H.R. Varian, *Information Rules: A Strategic Guide to the Networking Economy*, Boston, Harvard Business School Press, 1999, to that of N. Elkin-Koren and E.M. Salzberger, *Law, Economics and Cyberspace*, Cheltenham, Edward Elgar, 2004.
81. Think about love or misery. Economists assume that money can buy love, contrary to the Beatles, and will respond that love and other 'positive' emotions can be quantified as having an infinite value and hence beat all other interests at stake. Misery can be compensated for with money, and courts do that on a daily basis. A person that was injured might be happy to receive a monetary compensation ex post. But how many would agree to loose their leg for a huge sum, ex ante?
82. *See* discussion in R.O. Zerbe, *Economic Efficiency in Law & Economics*, Cheltenham, Edward Elgar, 2001, pp. 3-4.

3.3.2. Quantity

Economists are naturally happy when the numbers show growth in the market: more jobs, more products, more sales, more money. Economists are willing to work hard to produce 'more', but it is not the quantity that is valued per se. Sometimes 'quantity' is a shortcut and means for other goals.

Economists often act to allow more players to enter the market. They work hard to enact antitrust laws and enforce them, so that no one is excluded from the market due to artificial barriers set by the incumbent players. Such antitrust laws might be interpreted as aiming at 'more' players, but in fact, they are aiming at correcting what is perceived as a market failure. Quantity is just an indication, or a shortcut, for competition. What is valued here is not participation in itself, but competition. Competition is good because it is considered to be the best operating mode of the market. It is valued because it assures us, so the economists assure us, that the market functions well. That quantity is just an indication and not a goal, is illustrated in the cases in which economists acknowledge 'natural monopolies'. Sometimes, one is enough and is the best mode of the market. In such situations quality is achieved through minimal quantity.[83]

When we talk about quantity of *activities*, the quantity indicates and serves growth. Growth is not a neutral term. It reflects the enlightenment idea of progress, that more is better.[84] Indeed, it often is. More activity in the market means that more people have jobs and more people have more money to spend or invest, and these result – though not always – in a better quality of life. In this use of the variable of 'quantity', it serves as a means to achieve other goals, such as quality of life. Quantity is thus an indication of quality, the latter referring not to the internal functioning of the market itself, but to the external affects of a well-functioning market.

3.4. The Democratic View of Copyright Law

The economic analysis assumes that more knowledge promotes the social welfare and thus is desirable. But it is not the only possible view of the goal of copyright law. We might query the social advantages of knowledge and find out that we can answer by pointing to democratic values.

Let us look at the route this view has taken in US copyright law. The Constitution, legislators, scores of judges, scholars and practitioners have repeated the goal of copyright law: it is to promote the progress of science and useful arts. 'Science' is to be understood as 'knowledge'.[85] But few have paused to think what this actually

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83. *See* M.A. Lemley and D. McGowan, 'Legal Implications of Network Economic Effects', 86 *Cal. L. Rev*. 479-611 (1998).
84. *See* Birnhack, *supra* note 16.
85. *See* E.C. Walterscheid, 'To Promote the Progress of Science and Useful Arts: The Background and Origin of the Intellectual Property Clause of the United States Constitution', 2 *J. Intell. Prop. L.* 1-56 (1994), p. 51.

means. Why, in fact, is promoting the progress of knowledge important? Of course, it reflects an ideal of modern society that values knowledge per se. We measure progress, among other things, according to rates of literacy. We think learning treats us well. But then again, why? One answer might turn on the individual: the more we learn and know, the more we achieve pleasure and avoid misery. By knowing more we can make better judgments about what is good for us. This utilitarian view is hard to argue with (ignoring romantic views of ignorance as a blessing). But the theory of (Anglo-American) copyright law is not fixed on the individual or at least not on the individual alone. Rather, the *collective* lies at the core of copyright law. The good that we find in the promotion of knowledge should be evaluated according to the polity. In this sense, copyright law is to achieve a political ideal. We should be asking why is knowledge and the promotion thereof a good thing for the polity at large? The answer is that we believe that knowledge serves values that we, in a democratic society, cherish. This invites a further question: what are these values, or put differently, what is our conception of democracy?

A few scholars advocated a democratic understanding of copyright law. Neil Netanel offers a 'democratic paradigm.'[86] In his view, copyright law serves two functions. One is that of *production* and the other is a *structural function*. The latter means that copyright law creates and fosters an independent sector of speech:[87] it is independent from the government. Netanel's main concern for the fate of free speech falls within the classic *governmental paradigm*: that which is concerned with governmental controls of free speech. This indicates the democratic value which he seeks to protect and promote: that of self-government. This in turn indicates a specific conception of democracy (and here I depart from describing Netanel's view): it is one of a majoritarian view. We have already seen this theory in our discussion of free speech. It is the Millian distrust in government coupled with the Meiklejohnian majoritarian view of democracy. This of course does not mean that this is all that Netanel finds in democracy. Indeed, his view includes additional values such as pluralism and diversity and participation.[88]

For the purpose of the argument, I will separate the majoritarian view from the richer conceptions of democracy. What is the instruction of the majoritarian view in the shaping of copyright law? It seems that it is interested in fostering *more* private speech to counter governmental power. The emphasis is, accordingly, on the *production* and *quantity* of expressions. This view is indifferent to the content and quality of the speech.

Other conceptions of democracy are concerned not only with the risk of governmental abuse of power, but of *any* abuse of power. This is the *corporate paradigm*, similar to the one we have seen in our discussion of the participatory conception of free speech theory. These conceptions are guided by the Millian view that wishes to protect us not only against the 'tyranny of political rulers', but also against the

86. Weinstock Netanel, *supra* note 26.
87. Id., at pp. 288, 341, 352.
88. Id., at pp. 343, 362.

'tyranny of the majority.'[89] Copyright law enables not only financial advantages to its holders, but also acts as cultural control and political power. Those who hold this conception of democracy are interested in maximizing the dissemination of knowledge and minimizing control over intellectual works. This view, as proposed by Niva Elkin-Koren, draws on the political theory of Habermass and advocates that we create a deliberative sphere which is insulated from the effects of both government *and market*.[90] Once the market affects this deliberative sphere and thus determines de facto its contents, there are immediate distributive consequences. Not everyone can participate on an equal basis. Some participants' speech is limited, in that their ability to use raw expressive material to create their own expression is limited. Accordingly, this view focuses not only on production of knowledge (speech/expression), but on assuring its dissemination and access.[91]

Instead of a majoritarian view that focuses on the once-in-every-few-years elections, we can view democracy to be interested also in what happens between elections: this view holds that citizens form their political views not only immediately before voting, but in any daily social practice.[92] Accordingly, the weight of the self-government principle shifts from the singular act of voting to the on-going collective deliberation. Accordingly, the public discourse gains more importance than under the majoritarian view. A robust public domain provides both the resources of such a debate and its forum.

This conception of democracy instructs us to construct copyright law in a way that would maximize citizens' ability to participate in the collective self-government and deliberation. It is committed to preserving a robust public sphere. This means an emphasis on *dissemination* of knowledge and *access* to it, but also an emphasis on assuring that other citizens can *participate* in an active way in the democratic process, and not only in the role of passive listeners. Participation, in this context, means *active usage* of intellectual works and hence requires a rich public domain. This view is interested not only in *more* speech, but in having more participants and a *better* quality of speech, so to promote the public discourse. More and better knowledge enables us, collectively, to make better decisions about our (collective) life.

The democratic view departs from the market view on the dimension of quantity/quality. It takes a firmer position than the market view: both quantity and quality are valued per se. The political goal of enhancing human knowledge ('promoting the progress') and an interest in the *use* of the works as an inseparable

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89. Mill, *supra* note 35, at pp. 5-9.
90. *See* e.g., N. Elkin-Koren, 'Cyberlaw and Social Change: A Democratic Approach to Copyright Law in Cyberspace', 14 *Cardozo Arts & Ent. L.J.* 215-295 (1996), pp. 218-234; Benkler, *supra* note 2; Y. Benkler, 'A Political Economy of the Public Domain: Markets in Information Goods versus the Marketplace of Ideas', in R. Cooper Dreyfuss, D. Leenheer Zimmerman and H. First (eds.), *Expanding the Boundaries of Intellectual Property: Innovation Policy for the Knowledge Society*, Oxford, Oxford University Press, 2001, p. 267.
91. *See* Benkler, *supra* note 90.
92. *See* Elkin-Koren, *supra* note 90, at pp. 218-234.

part of their production dictates a clear instruction: the *more* works we have and the more speakers participate in the public discourse and the *better* works we have, the more we progress.

But we have to fine tune these terms, since in many cases we cannot have both the 'better' and the 'more' at the same time. The case of repetition sharpens the terms and the democratic view's position. When a citizen repeats what someone else has already said – repeating Martin Luther King's *I Have A Dream* without permission – this indeed enhances the quantity of expression, but only in a technical way. Because it is an exact repetition of the expression, it seems that it does not add new ideas. The market view would object to this repetition for it does not consider multiple, identical, expressions to enhance either the quantity or the quality of the public discourse. At first sight, it seems that the democratic view agrees: if we detach ideas from the people who hold them and focus on the former alone, then repetitions of expressions might not be considered to improve the quality of the public discourse. But if we pay attention to the *speakers* and not only to the speech, then their *participation* is valued per se. The value of participation reflects not only the value of self-government, but also that of *equality*: that there should be no limitations on the participation in the deliberative process.[93] Furthermore, repetition might depend on context. Some repetitions of expressions might create new meanings, and thus new ideas, despite the use of the same form. Hence, although it seems just a duplication of speech, it is in fact new speech.

However, to deduce that the democratic view allows repetitions of expression per se is a hurried and unwarranted conclusion. The democratic view is not blind to the economic structure of copyright law, and shares much (but not all) of the ideas of the market view. It differs in that it refuses to give up other values. So the democratic view might run into a conflict: promoting participation through allowing repetitions might undermine the incentive theory. This tension reflects the internal conflict of copyright law. It is solved by copyright's mechanisms, and especially the fair use defense. The defense is supposed to consider various factors to help us determine whether the use undermines the incentive theory, and whether it enhances the democratic values we are interested in. A democratic view would instruct us to operate the fair use defense in a manner that better reflects its basic values, and to avoid the flaws created by the market view.

4. THE PUBLIC DOMAIN AND THE MARKET

The discussion thus far makes it clear that in order for us to construct the public domain we must turn to first principles, not only of copyright law, but of free speech jurisprudence as well. Free speech jurisprudence and the public domain, derive

93. In many cases, we value repetitions for exactly this reason. Think of petitions. They are an organized form of multiple repetitions of the same idea, expressed in the same way. Petitions are powerful because they allow many to participate and shape their own fate.

from the same political theories. The first principles stem from our concepts and conceptions of the market and its role in a liberal-democratic state and from our conception of democracy and the role of the government, to name just a few main points. Hence, we should also maintain coherency when articulating the details and doctrines of copyright law and of free speech jurisprudence: each rule needs to fit the respective concept from which it derives, which in turn needs to fit basic principles. The theories of each field are not estranged. The two fields share the same theoretical cradle.[94]

The two fields cover, to a great extent, the same subject matter. Most of the speech covered by the free speech principle is also considered to be an 'expression' under copyright law. The two subject matters are not entirely congruent, as free speech law excludes some kinds of expressions (such as obscenity and fighting words in the US, or hate speech in Germany and France) which might, nevertheless, be copyrighted. Free speech also covers ideas, which are excluded from copyright protection, and of course, copyright protection is limited in its duration and is subject to some exceptions such as the fair use defense. So not all 'speech' is also 'expression' and vise versa, but most of the time, most of the 'speech' is also 'expression' and vice versa.

Given these baselines, it is time to tie the loose ends. Do our conceptions of each field, measured along the variables of quality and quantity and along the crucial issue of governmental intervention, match in a coherent manner? How do we wish to construct the public domain: do we want it to have more expressions, ideas and information, or do we prefer the domain to be a rich, diverse, and useful reservoir? In other words, do we prefer more or better? We could have blinded ourselves to our ex-ante preference as to each theory of each of the two fields, copyright law and free speech jurisprudence, 'mix' the various theories together and then figure out which produces the best pair. But the requirement of coherency obliterates some of these matches.[95] Accordingly, I will focus on two possible pairs: firstly, what happens (or should have happened) when we hold a market view of copyright law, i.e., the familiar incentive theory and a marketplace of ideas theory of free speech? The second pair of rationales will be the democratic ones: what happens when we hold a majoritarian or a participatory view of free speech and a democratic view of copyright law?[96]

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94. But not necessarily the historical cradle. *See* D. Leenheer Zimmerman, 'Information as Speech, Information as Goods: Some Thoughts on Marketplaces and the Bill of Rights', 33 *Wm. & Mary L. Rev.* 665-740 (1992).
95. Another issue, which I will not delve into at this point, is that we might hold an eclectic theoretical view, i.e., hold simultaneously more than one theory of either free speech or of copyright law (or of both).
96. A full-scale analytical inquiry should have created a full-chart of all relevant rationales of both free speech theory and of copyright law, and examine all possible matches (or mismatches). However, I leave the discussion of the matches which involve deontological views to another day.

4.1. THE MARKET AND THE MARKETPLACE OF IDEAS

Copyright, when read under the economic analysis and free speech jurisprudence, when read under the Millian 'search for the truth' theory, vision the market as the best way to achieve their goals – growth and the truth, respectively. Due to the belief in the market, the dimension of quality/quantity does not raise any serious implications under this intersection. Both rationales believe that the quantity of speech or expressions should be enhanced. Both shy away from declaring an explicit interest in improving the quality of the market (either the marketplace of ideas or the market of commodified expressions). But quantity serves as a proxy for quality: both rationales wish that the market will improve, but they refuse to do anything active to promote this wish.

The two legal fields depart in the case of repetitions of speech, or what we would call 'copying' in copyright law terms. Copyright law insists that expressions differ from each other (this is evident in the requirement of originality and in the doctrine of substantial similarity). While the marketplace of ideas theory is indifferent to repetitions, copyright law is not. To the contrary: it strives to prevent repetitions of expressions. Repetition of ideas is allowed under the idea/expression dichotomy and some repetition of expression is also permitted under the fair use defense. The task of examining whether one expression repeats another is left in the hands of the government – as an enforcer of copyright law and as the provider of the judicial system.

In the US, understood under the marketplace rationale, the First Amendment rejects the kind of interference that copyright law requires. It is the kind of interference that the well-known case of *Buckley v. Valeo* overruled in the context of limitations on campaign finance: limiting speech of some elements of our society in order to enhance the relative voice of others. *Buckley* declared this to be 'wholly foreign' to the First Amendment.[97]

Once we are guided by a market-based analysis in both copyright law and in free speech jurisprudence, we might be able to deduce some practical instructions from the theoretical inquiry: that the government's role should be minimized to situations of market failure; that only 'more' can serve as a legitimate means to promote the market, while the semi-declared goal of promoting the 'better' is deliberately left unattended. This view leaves us with a minimal state and with a public domain that is run like a market, and which is left to itself.

It is a busy market, with a lot of 'noise' and few quality filters: everything enters the market and all the expressions and speech acts compete with each other. The criterion is that of the market, which seems to prefer that which it can quantify in dollars, i.e., that which sells and if we can sell more at lower costs – it is better. The result is the marketplace of ideas and expressions we have now: there is a lot of content, but most of it is rather shallow, repetitive, and very much on the side of the mainstream. It is not the sort of speech that provokes new ideas or poses

97. 424 U.S. 1, 48-49 (1976).

any challenges to the status quo. Indeed, entertainment sells better than political discussions, sports sell better than in-depth documentaries, and sex sells more than anything else. The content is measured not on its speech-value, but on its ability to sell advertisements, so we – the citizens now transformed into consumers – can buy more. The marketplace subjects ideas to the logic of the market. Indeed, the off-mainstream ideas, the innovative ones, often stem from none, or at least less commercial settings, such as the academia, or marginalized individuals or groups.

This is the marketplace of ideas we currently have, in which the public domain is reduced to serve the market and is not considered to have a value of its own. Do we have an alternative?

4.2. DEMOCRATIC VIEWS OF COPYRIGHT AND OF FREE SPEECH

Under democratic views – with their many nuances – of both copyright law and of free speech jurisprudence, we need not shy away from explicitly attempting to promote the quality of our intellectual reservoir and of our public sphere. This is a situation of congruence of all the dimensions we have been discussing. Copyright law interferes in free speech, but it is explained, under its democratic view, to serve the political goal of promoting progress, which in turn is explained as a reference to our conception of democracy. So it is interference in the marketplace of ideas for the sake of improving the *quality* of the public discourse. This is exactly the kind of interference that the participatory view of free speech is interested in and allows. Assuming we would hold consistent conceptions of democracy under both legal regimes, the congruence allows us to make the *shared goal argument*:[98] we can say that the two legal regimes do strive to achieve the same goal. We can even say that copyright is the engine of free speech. We can base the *shared goal argument* and the engine metaphor on a normative basis, void of originalist references to the history of the Constitution, or to its structure and text.

This is the most attractive picture we can draw: it rests on solid free speech theory, on solid copyright theory, achieves theoretical coherence and has clear lessons for us when shaping the public domain. Read under these theories, both copyright law and free speech jurisprudence aim at a rich and diverse public domain, in which deliberation can take place without any impediments, in which all who wish can participate, regardless of their market power. It is a public domain, which is interested in the exchange between the multiple voices and their expressions, which realizes that new ideas form when old ideas interact. In other words, this is a public domain that rejects cultural control, which is executed through the use of property rights; it is a public domain that is required by the best reading we can offer for both copyright law and for free speech jurisprudence. It is a public domain which enables new participants to join in, build on the existing work, and that acknowledges that

98. *See supra* note 14.

repetition in a different context changes the meaning of a work, and thus should be considered a new work.[99]

5. CONCLUSION

Our public domain keeps shrinking, although more works than ever before are being created. It expands in quantity, but shrinks in quality. If we care about our polity and about the civil community that we share with our neighbors, we should not give up the goal of having the best public domain possible. When our free speech jurisprudence is inspired and guided by such a quest, then a robust public domain is (constitutionally) required. If we further base copyright law on this basis (a task which at least in the Anglo-American legal tradition is possible both as a matter of history and as a matter of statutory and constitutional interpretation), than we have two solid pillars on which to build a public domain which serves its purpose, i.e., it serves us as a political community, rather than serve very few (commercial) stakeholders. Governments have a role to promote this public domain. Unfortunately, they too often fail in the process.

99. On meaning making processes and their relevance to copyright law, *see* Elkin-Koren, *supra* note 90. Some examples of repetitions which produce new meanings are parodies (*see Campbell v. Acuff-Rose*, 510 U.S. 569 (1994)); postmodern art; music sampling, and speech appropriated as identity building blocks (*see* R. Coombe, *The Cultural Life of Intellectual Property: Authorship, Appropriation and the Law*, Durham (N.C.), Duke University Press, 1998).

Chapter V

Wrapping Information in Contract: How Does it Affect the Public Domain?

Lucie Guibault

1. INTRODUCTION

Contracts are an essential tool in the distribution of information. If a specific element of information has any commercial value at all, its access and use will most likely be governed by the terms of a license, whether it is protected by an intellectual property right or not. This is particularly true in the digital networked environment.[1] Indeed, the combined use of contractual terms and technological measures gives individuals the ability to control the use of their information: first, by allowing them to affix conditions of use to each piece of information; and second, by permitting them to prevent further reproductions or distribution of such information thanks to anti-copying devices. The network's interactive nature provides indeed the perfect preconditions for the development of a contractual culture in the digital networked environment.[2] A variety of licensing methods are already or will soon be made possible as the digital networked environment develops, thereby allowing for the use of information to be licensed off-line or on-line directly to end-users through individual transactions. As a result, all kinds of information are being distributed on the Internet subject to the terms of a license, including among other things: books, magazines, newspapers, videos, music, television and radio programme listings, collections of case law and legislative texts, real estate listings, telephone directories, restaurant

1. *See*: L. Guibault, *Copyright Limitations and Contracts: An Analysis of the Contractual Overridability of Limitations on Copyright*, The Hague, London, Boston, Kluwer Law International, 2002, coll. Information Law Series No. 9.
2. P.B. Hugenholtz, 'Copyright, Contract and Code: What Will Remain of the Public Domain?', 26 *Brooklyn Journal of International Law* 77-90 (2000), p. 79; P. Goldstein, 'Copyright and its Substitutes', *Wisconsin Law Review* 865-871 (1997), p. 867.

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 87–104

directories, sports competition results, human genome sequences, plant taxonomy, geological and meteorological data, stock exchange quotes, or financial indices.

The central question addressed in this chapter is whether the use of contracts with respect to the distribution of public domain information bears any impact on the supply of information and on the composition of the public domain. Would contracts that restrict the use of public domain information or limit the exercise of uses privileged under the law be actually enforced by the courts? If so, would the use of contracts in the trade of information tend to increase the amount of information available to the public anyway? Or would it, on the contrary, withdraw from the public domain some elements of information that were until then freely available?

This chapter focuses on standard form contracts, rather than negotiated contracts, because this type of contracts actually governs the vast majority of transactions relating to information in the digital networked environment. Moreover, the enforcement of standard form contracts may ultimately have a greater impact on the balance of interests reached by the intellectual property regime than that of a negotiated agreement. Contrary to standard form contracts, the conclusion of fully negotiated contracts presupposes a more equal bargaining power between information producers and users of the licensed information. Individual users sitting across a negotiation table are often in a better position than an individual faced with a 'click-wrap' license to react to an information producer's attempt to contractually restrict the use of public domain information or of protected material beyond the bounds normally set by intellectual property law. Arguably, no individual with a reasonable degree of bargaining power and knowledge of the law and the market would agree to a restriction on the use of public domain information or on the exercise of privileged uses under the law, unless some advantage could be drawn from the entire contract. Consequently, restrictive license terms included in fully negotiated contracts are not likely to be as widespread as those included in standard form contracts.

This chapter is structured as follows. Part 2 examines contracts relating to the public domain, as they are likely to be concluded in the digital networked environment. To this end, I first give a definition of the public domain from a European perspective. On the basis of this definition, I then consider how contracts over information not or no longer qualifying for protection, before turning to contracts over privileged uses. In this part, references to intellectual property law will mostly be made in relation to copyright and database law, because most information licensed over the Internet would fall, if at all, under either the copyright or database right regimes. Part 3 of this chapter analyses in greater detail the possible impact the commodification of information through contracts may have on the public domain. For this purpose, I propose to consider the legitimacy of this private ordering system, its effectiveness compared to the traditional public ordering system and its symbolic meaning. In Part 4, I draw a conclusion regarding the potential effect that wrapping information in contract may have on the public domain.

2. CONTRACTS RELATING TO PUBLIC DOMAIN INFORMATION

The use of standard form contracts to bind consumers, or end-users, to restrictive terms of use of information distributed over the Internet is a fairly recent phenomenon. Technological protection measures such as encryption technology make it possible to apply and enforce mass-market licenses on the Internet. The practice of marketing information to end-users subject to the terms of a standard form contract primarily aims at restricting the end-users' capacity to use, reproduce or redistribute an undertaking's information product, whether this information is protected by an intellectual property right or not.

2.1. THE PUBLIC DOMAIN FROM A EUROPEAN PERSPECTIVE

The concept of 'public domain' finds its origin in the French Decree of 1791, in which the protection of the author's dramatic works was as important as the recognition and enlargement of the public domain. In the philosophy of the late eighteenth and nineteenth century, an author was deemed to vest his work in the public sphere through the mere act of publishing it. Authors were seen as servants of the public interest and the public property by the very fact that they contributed to the growth of knowledge.[3] This perception transpires clearly from the writings of several thinkers of those times, including Le Chapelier,[4] Renouard,[5] and Hugo. In his speech of 1878 entitled '*Domaine public payant*', Hugo advocated the creation of a property right in favor of authors on their works, coupled with a right for publishers to publish all works after the death of their author, under the sole condition that a very low royalty not exceeding five to ten percent of the net revenue be paid to the direct heirs.[6]

The idea that the author's interests are subordinate to the public interest was somewhat short lived, however. For the natural rights theory has gradually taken over as the main foundation of the continental European authors' rights regime.[7] Centered on the person of the author, the natural rights argument holds that 'all human beings who create works of the mind are entitled to a specific right embracing protection

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3. A. Latournerie, 'Petite histoire des batailles du droit d'auteur', 5 *Multitudes* Mai 2001, available at: <multitudes.samizdat.net/article.php3?id_article=168#nb15>.
4. Decree of 13 January 1791, Art. II: 'Les Ouvrages des Auteurs morts depuis cinq ans & plus, sont une propriété publique, & peuvent, nonobstant tous anciens privilèges, qui sont abolis, être représentés sur tous les théâtres indistinctement', available at: <www.juriscom.net/documents/RapportLeChapelier.pdf>.
5. A.-Ch. Renouard, *Traité des droits d'auteurs, dans la littérature, les sciences et les beaux-arts,* Paris, J. Renouard & Cie, 1838, vol. 2, p. 346.
6. *Discours d'ouverture du Congrès littéraire international de 1878,* Paris, 1878 available at: <www.inlibroveritas.net/lire/oeuvre1923-page5.html#page>.
7. J. Ginsburg, 'A tale of two copyrights: Literary property in revolutionary France and America', 64 *Tulane L. Rev.* 991-1023 (1990).

of their moral and economic interests and covering all use of their works'.[8] This statement can be broken down into two elements: the 'personality rights' element, and the 'reward' element. Both elements find their justification in the ideology of the 'personal creation', i.e., in the intimate relationship that the author entertains with their work. Both attest to an essentially individualistic approach to copyright protection, where the 'reward' argument puts the accent on the material interest of the author (i.e., exploitation rights), while the 'personality rights' argument concerns the immaterial interest of the author (i.e., moral rights).

The debate that has been going on for at least a decade in the United States over the growing commodification of information and its impact on the wealth of the public domain has only recently started to take place in continental Europe.[9] Contrary to the United States, where a whole body of literature recently developed on the subject, current continental European legal literature usually makes reference to the notion of 'public domain' only incidentally, mostly in relation to the duration of the authors' rights protection. Discussions around the concept of 'public domain' did arise in the course of the twentieth century in France, Italy, Germany, and a few other countries following the author's rights tradition. The scholarly debate took, however, an entirely opposite direction than the one currently put forward in the United States, for it had been suggested to introduce a remuneration right – otherwise known as *domaine public payant* (or 'paying public domain'), referring thereby to Hugo's proposal of 1878 – for the use of works that were no longer protected by copyright and had fallen into the public domain. Several proposals regarding the *domaine public payant* had been elaborated, one of which would have allocated the sums collected under this regime to the author's heirs or assignees and another which would have gathered the sums into a cultural fund and awarded subsidies to subsequent authors with a view to helping creation.[10] The very controversial nature of this proposal no doubt explains why it has never been widely put into practice and why it has now in the main been relegated to the past.[11] One clear indication of the fact that the discourse on the *domaine public payant* found its roots in the natural rights theory and in the author's personality rights is that no such claim has ever been made with respect to patented inventions that have fallen into the public domain.

What constitutes then the public domain in continental European law? When trying to map the public domain from a continental European law perspective,[12] it must be emphasized that intellectual property regimes are designed to strike a

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8. J. A. L. Sterling, 'Creator's Right and the Bridge Between Author's Right and Copyright', *IIC* 302-308 (1998), p. 306.
9. Hugenholtz, *supra* note 2, p. 79.
10. B. d'Ormesson-Kersaint, 'La protection des oeuvres du domaine public', 116 *Revue internationale du droit d'auteur* 73-151 (1983); M. Jean-Richard-dit-Bressel, *Ewiges Urheberrecht oder Urhebernachfolgevergütung?*, Baden-Baden, Nomos Verlag, 2000, UFITA-schriftenreihe, p. 14;
11. E. Ulmer, *Urheber- und Verlagsrecht*, 3rd edn, Berlin, Springer Verlag, 1980, p. 348.
12. *See*: Pamela Samuelson, 'The Challenges of Mapping the Public Domain', p. 7 in this volume; and S. Choisy, *Le domaine public en droit d'auteur*, Paris, Litec, 2002, p. 53

delicate balance between the interests of authors, inventors or other rights holders in the control and exploitation of the fruit of their intellectual labor on the one hand, and society's competing interest in the free flow of ideas, information and commerce on the other hand. To this end, most intellectual property regimes admit a number of inherent limits that are designed to promote the dissemination of new works or inventions and to ensure the preservation of a vigorous public domain. These limits are the definition of protectable subject matter (the idea/expression dichotomy), the criteria for protection (the requirement of originality or substantial investment), the fixed duration of the intellectual property protection, and the exhaustion doctrine.

Hence, the public domain comprises elements that no intellectual property regime protects. In the context of copyright protection, the principle according to which copyright protection vests only in original works contributes in maintaining the strength of the public domain, as the requirement of novelty for inventions or substantial investment for databases. Corollary to the requirement of originality is the principle that copyright only protects the form of expression and not the underlying ideas.[13] Anyone may communicate or reproduce the ideas contained in copyrighted material provided that the form of expression is not also reproduced.[14] Some national copyright laws expressly exclude certain types of information from the copyright protection. Article 11 of the Dutch Copyright Act 1912 and Article 5 of the German Copyright Act state for example that no copyright subsists on laws, decrees or ordinances issued by public authorities, or in judicial or administrative decisions.

In the context of the *sui generis* right on databases,[15] collections of data only receive protection if the collection, verification and presentation of the data shows a substantial investment evaluated in a qualitative and quantitative manner. While the database directive contains no express exclusions from protection, the European Court of Justice (ECJ) has recently given a rather restrictive interpretation of what qualifies as a substantial investment.[16] By making a distinction between 'created' and 'obtained' data, the ECJ embraces one of the main arguments underlying the so-called 'spin-off doctrine'. According to this doctrine, the database right accrues only with respect to investment directly attributable to the production of the database.

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13. P.B. Hugenholtz, *Auteursrecht op informatie*, diss. Amsterdam (UvA), Deventer, Kluwer, 1989, p. 166.
14. *See*: WTO, Agreement on Trade-Related Aspects of Intellectual Property Rights, Annex 1C of the GATT Agreement, signed in Marrakech, April 1994, Art. 9(2): 'Copyright protection shall extend to expressions and not to ideas, procedures, methods of operation or mathematical concepts as such'.
15. Directive 96/9/EC of the European Parliament and of the Council on the legal protection of databases, Official Journal L 077, 27/03/1996, pp. 20-28.
16. *British Horseracing Board Ltd v. William Hill Organisation Ltd* (C203/02) [2004] E.C.R. I-10415 (ECJ); *Fixtures Marketing Ltd v. Svenska Spel AB* (C338/02) [2004] E.C.R. I-10497 (ECJ); *Fixtures Marketing Ltd v. Oy Veikkaus AB* (C46/02) [2004] E.C.R. I-10365 (ECJ); *Fixtures Marketing Ltd v. Organismos Prognostikon Agonon Podosfairou (OPAP)* (C444/02) [2004] E.C.R. I-10549 (ECJ).

The doctrine is premised on the 'incentive' rationale of the *sui generis* right.[17] As a consequence, makers of sole source collections of data, like sports event schedules and telephone books, may be left in the future without protection under the database right. Note, however, that under the Dutch '*geschriftenbescherming*' regime, the author of a writing or a database that neither meets the criterion of originality or of substantial investment has the right to prevent the slavish imitation of such content, provided that the writing had been made public or was destined to be made public.[18]

Intellectual property rights are not perpetual. Copyright typically lasts for the life of the author plus seventy years after her death, while the database right lasts for a period of 15 years from the completion of the database or from any substantial revision thereof.[19] When the protection on a work or other subject matter lapses, it normally falls into the public domain for everyone to freely reproduce or communicate to the public. Thus, part of the public domain is composed of works or other subject matter once subject to protection, but created so long ago that the protection has since expired. Indeed, notwithstanding the controversy around the establishment of a *domaine public payant*, it is universally accepted in continental Europe that any work the term of protection of which has lapsed can be used freely by anyone, e.g. without prior authorisation or payment of royalty.

Finally, copyright protection is confined by the application of the exhaustion doctrine. According to this doctrine, once a work is sold or distributed on a specific territory with the consent of the rights holder, the latter may not control or prevent the further distribution of that work. This rule is laid down in Article 4(2) of the Directive on copyright in the Information Society,[20] which states that 'the distribution right shall not be exhausted within the Community in respect of the original or copies of the work, except where the first sale or other transfer of ownership in the Community of that object is made by the right holder or with his consent'. The exhaustion doctrine applies to the distribution of physical copies of computer programs, i.e., on floppy discs, CD-ROMs, and the like. Consequently, a distinction must be made between the off-line or on-line distribution of copyright protected information. The notion that the electronic distribution of works does not give rise to the exhaustion doctrine because it falls under the scope of the right of making a work available to the public, rather than under the right of distribution, is now part of the *acquis communautaire*.[21] For more certainty, the European Commission clearly stated, in its report on the implementation of the Computer

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17. M.J. Davison and P.B. Hugenholtz, 'Football Fixtures, Horseraces And Spin Offs: The ECJ Domesticates the Database Right', 27 *E.I.P.R.* 113-118 (2005), at p. 114.
18. *IJsselstein v. Regulators Europa B.V.*, Dutch Supreme Court, 8 February 2002, *NJ* 2002/515.
19. Council Directive 93/98/EEC of 29 October 1993 harmonizing the term of protection of copyright and certain related rights, Official Journal No. L 290, 24/11/1993, pp. 9-13; in the United States: Pub. L. 105-298, 27 October 1998, 112 Stat. 2829.
20. 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, L 167, 22/06/2001, pp. 10-19.
21. M.M. Walter (ed.), *Europäisches Urheberrecht – Kommentar*, Wien, New York, Springer Verlag 2001, p. 1053.

programs directive, that community exhaustion only applies to the sale of copies, i.e., goods, whereas supply through on-line services does not entail exhaustion.[22] For this reason, the doctrine of exhaustion of rights will not be further discussed in the context of on-line contracts.

Apart from the copyright regime's inherent limits, a balance of interest between encouraging the creation and the dissemination of new creations is further achieved through the recognition of limitations on the rights owners' exclusive rights. Limitations on rights are designed either to resolve potential conflicts of interests between rights owners and users from within the intellectual property system or to implement a particular aspect of public policy. Technically, limitations should reflect the legislator's assessment of the need and desirability for society to use a protected subject matter against the impact of such a measure on the economic interests of the rights holders. This weighing process often leads to varying results from one country to the next. Potential conflicts between the interests of rights owners and those of society take place at different levels and have different grounds. Limitations typically protect freedom of expression and the right to privacy;[23] they safeguard free competition, promote the dissemination of knowledge, or respond to symptoms of market failure. Of course, certain limitations may have been adopted on more than one ground and the justifications underlying a particular limitation may change over time.

National laws are generally silent on the subject of the imperative character of copyright limitations. The legislator's silence could be interpreted either way, i.e., as providing arguments for or against the imperative character of limitations on copyright. Generally speaking, limitations on copyright have been adopted as an express recognition by the legislator of the 'legitimate interests' of users. However, whether the limitations embodying such 'legitimate interests' are to be considered imperative or not is likely to depend on a number of factors, including the lawmakers' conception of the overall objectives pursued by the copyright regime. The imperative or default character of the limitations must therefore be determined by examining the legislator's intent, as revealed in the legal commentaries and the jurisprudence.[24]

In view of the small volume of literature available in continental Europe on the subject of the public domain, it is difficult to tell whether the notion of public domain would generally be deemed in Europe as extending also to the user privileges recognised under intellectual property law, as it has been suggested in the American literature.[25] However, even if the statutory user privileges are not to be considered

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22. Report from the Commission to the Council, the European Parliament and the Economic and Social Committee on the implementation and effects of Directive 91/250/EEC on the legal protection of computer programs, COM/2000/0199 final.
23. P.B. Hugenholtz, 'Fierce Creatures. Copyright Exemptions: Towards Extinction?', keynote speech, IFLA/IMPRIMATUR Conference, *Rights, Limitations and Exceptions: Striking a Proper Balance*, Amsterdam, October 30-31, 1997, p.18; and F. Melichar in G. Schricker (ed.), *Urheberrecht Kommentar*, München, Verlag C.H. Beck, 1999, p. 735.
24. Guibault, *supra* note 1, p. 109.
25. *See* Pamela Samuelson, 'The Challenges of Mapping the Public Domain', p. 7 in this volume.

as part of the public domain in the strict sense, the widespread use of contractual restrictions on the exercise of the privileges recognised by IP law does affect the free flow of information or, as Madison calls it, the 'open space'.[26] In this sense, the use of restrictive contract terms to license protected material must be part of the analysis of the impact of the commodification of information on the public domain, because as Elkin-Koren notes, 'to the extent that contractual arrangements expand rights of control over informational works provided by copyright law, such contracts are shrinking the public domain'.[27]

2.2. Contracts over Information Not or No Longer Qualifying

Nowadays, it has become common practice to distribute commercially valuable information over the Internet subject to the terms of a standard form contract. Whether the information concerned relates to a telephone directory, a news service, sports scores (such as football, tennis, golf or horse races), stock exchange rates, bank quotes, or any other type of data or information, the end-user's actions with respect to such information are often restricted under the terms of use set out by the provider. Despite the European Court of Justice's recent decisions according to which no database protection is granted for the mere 'creation' of data,[28] the use of restrictive license terms with respect to information posted on the Internet has not discontinued. For example, the Terms of Use posted on the website of the London Stock exchange are very strict with respect to the permitted use of the information posted there:

> 'You are permitted to download, print, store temporarily, retrieve and display Information from the Website on a computer screen, print individual pages on paper (but not photocopy them) and store such pages in electronic form on disk (but not on any server or other storage device connected to a network) for your personal use. The permission to recopy by an individual does not allow for incorporation of material or any part of it in any work or publication in any form.
>
> You are not permitted (except where you have been given express permission to do so) to adapt or modify the Information on this Website or any part of it and the Information or any part of it may not be copied, reproduced,

26. M.J. Madison, 'Legal-ware: Contract and Copyright in the Digital Age', 67 *Fordham Law Review* 1025-1143 (1998), p. 1029.
27. N. Elkin-Koren, 'Copyrights in Cyberspace – Rights without Laws?', 73 *Chicago-Kent Law Review* 1155-1201 (1998), p. 1189.
28. *British Horseracing Board Ltd v. William Hill Organisation Ltd.*, (C203/02) [2004] E.C.R. I-10415 (ECJ).

> republished, downloaded, posted, broadcast or transmitted in any other way to any third parties for commercial gain.'[29]

This website arguably contains some copyright protected elements, like the layout of the website itself and the commentaries on the activities of the stock exchange, but world indices, news items, statistics and market data do not qualify, in my opinion, as original protectable subject matter under copyright law. Admittedly, in this case, the information with the highest commercial value may not be the information that is protected by copyright, but rather the one that does not qualify for protection. In a competitive world where quick and accurate reporting of financial news is the rule of the game, world indices and market data may actually be what the terms of use are all about!

The problem with this type of clause is that it purports to wrap all categories of information into an indiscriminate single contractual mould, whether such information is protected by an intellectual property right or not. Furthermore, there is in practice no way for the user to ascertain, only from consulting the provider's website, which information is likely to be the object of an intellectual property right and which not. Although this problem is not limited to the digital networked environment, the tremendous increase in the volume of exchanges of information of all sorts generated by the Internet certainly makes it more pressing. How can an average user easily know whether a work has fallen into the public domain or whether an element of information qualifies for protection? At this time, I would suggest that it is virtually impossible for this person to find out. Would the re-introduction of formalities as a requirement for copyright protection – and for database protection – constitute an acceptable solution to remedy the lack of legal certainty with respect to what is protected and what not?

In the case where some elements of information are not – or are no longer – qualifying for intellectual property protection, the licensor's claim with respect to the information is based purely on the application of technological protection measures controlling the access to and use of the information in combination with the contractual arrangement made around it. Despite the absence of intellectual property rights, it may be of great commercial importance for a provider to control the use and dissemination of the information he makes available. In a competitive market, the rule of supply and demand should operate to weed out the extremes, e.g. those licenses that impose excessively harsh restrictions or an excessively high price. But in most situations, it would be up to the courts to decide whether to uphold the license agreement or not. There is very little jurisprudence on this point, and, as the two following examples illustrate, the courts sometimes have diverging views on the subject.

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29. London Stock Exchange, Disclaimer <www.londonstockexchange.com/en-gb/Global/F/disclaimer/>.

The District Court of Rotterdam upheld the validity of a 'browse-wrap' license applied to non-copyrightable information in *Netwise v. NTS Computers*.[30] In this case, the plaintiff Netwise produced and made a telephone directory available to the public on-line. Conditions of use were accessible by clicking on a button placed on the left hand-side of the screen. To avoid spamming, the conditions required that the user agree not to send messages to more than one person listed in the directory at a time, failure of which gave rise to a substantial fine. In defence, NTS Computers argued that it was not bound by the general conditions, because at the time of visiting the site, it hadn't been asked to agree to the terms. The judge noted that NTS, as a professional visitor of the website, could be expected to understand that the easily accessible 'Conditions' would contain terms of use to which Netwise wished to bind the users of its directory. One could further expect NTS, the intention of which was to make use of such data for its marketing activities, to know that administrators of databases are not always keen on spamming and therefore to take account of the prohibition on such activities that appeared in the general conditions of use. The judge upheld the license and concluded that NTS had accepted it and therefore was bound by Netwise's conditions by the mere fact that it made use of the information in the directory.

In *Vermande v. Bojkovski*,[31] the District Court of The Hague refused to enforce the publisher's license against the user. The case involved the posting on a student's website of parts of a commercial CD-ROM containing Dutch legislation, which is expressly excluded from copyright protection under Article 11 of the Dutch Copyright Act 1912. The plaintiff, a Dutch publisher, sued for copyright infringement. In support of his claim, the publisher argued that the student had breached the contract that was clearly printed on the product's packaging and that prohibited 'any unauthorized downloading or any other kind of copying of the CD-ROM'. The District Court admitted as a common practice the fact that producers of data and sound supports inscribe such statements on their products (as producers of gramophones did in the past) and that the restrictions included therein are usually broader, sometimes much broader, than what the law provides.[32] The Court considered that there is for the buyer of a CD-ROM little reason to see in such a statement anything more than a warning about the existence of statutory limitations on use. The defendant could and might therefore have understood the statement in such a way that the word 'unauthorized' meant nothing else than 'legally unauthorized'. In other words, the Court interpreted the contract clause as aiming only at the limitations provided under the Dutch Copyright Act, rather than at any other broader limitation flowing from the contract.

At this time, and in view of the scarce volume of relevant case law, it would be pure speculation to say how national courts would decide should a plaintiff demand

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30. *Netwise v. NTS Computers*, Rechtbank Rotterdam, 5 December 2002, in *Computerrecht* 2003/02, p. 149 with annotation by A.R. Lodder, and in *Mediaforum* 2003/15 109-112 p. with annotation by M. Voulon.
31. *Vermande v. Bojkovski*, District Court of The Hague, decision of March 20, 1998, in *Informatierecht/AMI* 1998, pp. 65-67.
32. Id., p. 67.

the enforcement of a license purporting to restrict the use of information not or no longer qualifying for intellectual property protection.

2.3. CONTRACTS OVER PRIVILEGED USES

In view of the growing tendency to recognise 'click-wrap' licenses as valid and enforceable under European contract law, rights owners now have the power to condition every use of copyrighted material to the terms of a standard form contract. Indeed, copyrighted material is increasingly made available on the Internet under specific terms of use, which are often much narrower than what copyright law would otherwise allow. But for a few exceptions, continental European copyright law is silent on the issue of the status of the statutory limitations.[33] The provisions of the copyright systems therefore offer no definite guideline for the solution of conflicts arising between the user's legitimate interest in benefiting from a statutory limitation and a rights owner's freedom of contract. Is this kind of restrictive licensing valid and enforceable under copyright policy norms?[34] How far can parties contractually circumvent the limitations on copyright?

The answer to these questions is far from conclusive. European law recognizes very few mandatory limitations: the right to make a back-up copy of a computer program, the right to study, observe and test the computer program as well as to decompile it for purposes of interoperability, and the right for the lawful user of a database to access and use the contents of the database. Nevertheless, these mandatory provisions of the EC directives on computer programs and databases have been implemented differently among Member States, bringing about an inconsistent degree of 'imperativeness' for these provisions. Apart from these specific provisions, French and Dutch copyright legislation give no further indication concerning the mandatory character of limitations on copyright. In view of the strong naturalist foundations of the French *droit d'auteur* regime, the French courts would probably be reluctant to admit the mandatory character of the limitations included in the Intellectual Property Code. In the Netherlands, some court decisions would lead me to believe that the courts might take a more cautious approach and try to interpret contractual provisions in conformity with the letter and intent of the copyright law. In Germany, the application of the *Sozialbindung* principle could lend support to the argument that, although the law makes no express mention of the mandatory nature of the copyright limitations, the copyright system has been carefully designed so as

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33. There is one noticeable exception to this portrait, however. Although Belgian law lies beyond the scope of my study, it is worth pointing out that Belgium is the only Member State of the European Union, where almost all statutory limitations on copyright have been expressly declared mandatory. The act of 1998 implementing the Database Directive not only introduced in Belgian law all *mandatory* and *optional* limitations in favor of the lawful *user* of a database that were permitted under the Directive, but it also proclaimed the mandatory character of most other limitations included in the Copyright Act.
34. Goldstein, *supra* note 2, p. 868.

to incorporate public interest considerations. Consequently, a German court might conclude that an agreement enjoining the user from performing certain acts that are otherwise allowed under copyright law is contrary to the public interest and to the *Sozialbindung* principle.

In view of the absence of a general mechanism in continental European copyright law for solving potential conflicts between copyright and contract law with respect to the use of copyrighted material, the validity of contract clauses that purport to restrict the users' statutory privileges should be assessed according to the general rules of law.[35] The validity of such restrictive contract clauses should therefore be tested under the general rules of law, just as the contract clauses that purport to prevent the use of public domain information. Numerous mandatory rules of law limiting the freedom of contract have been adopted in Europe, which also apply to the formation and the execution of licenses, as they would for any other type of contract. Among them are the norms deriving from competition law, consumer protection law, constitutional law and the doctrine of abuse of rights, which may impose separate limits on the parties' freedom of contract with respect to the licensing of public domain information and to the exercise of the privileges that copyright law normally grants users of copyrighted material.

Generally speaking, the rules on copyright and the general limits on freedom of contract appear insufficient to ensure that the legitimate interests of users of copyrighted material are taken into account in the context of copyright licensing agreements. The inadequacy of the general rules of law is particularly acute with respect to the newly developed practice of marketing copyrighted works to end-users subject to the terms of a standard form contract. In fact, none of the legal principles examined provides sufficient means to control that the copyright owner's right is exercised in conformity with its intended purpose and that the functionality of the copyright regime is respected. The lack of effective control over this form of exercise of copyright may in the long term have negative consequences for the production, dissemination, and access to protected – and unprotected – subject matter. Tolerance for restrictive licensing practices may also have a determinative impact on the size and the wealth of the public domain.

3. IMPACT OF CONTRACTUAL PRACTICES ON THE PUBLIC DOMAIN

In view of the world-wide tendency to distribute public domain information subject to restrictive license terms or to distribute copyright protected works subject to terms that purport to restrict the exercise of user privileges normally conferred under the copyright act, the question to be addressed at this point is whether this practice of marketing information poses a threat to the integrity of the public domain and to the functionality of the intellectual property rights regimes. In this context, several

35. Guibault, *supra* note 1.

American authors have argued that such a contractual practice is comparable to the establishment of a private ordering system, in which individuals, groups, and corporate entities in domestic and transnational society generate the rules, norms, and principles they are prepared to live by.[36] The emergence of private governance or private ordering system, as a substitute to public governance, has already led to a substantial volume of scholarly literature in the United States,[37] but it is still relatively unexplored in Europe, at least from an intellectual property perspective. Applying Madison's scheme of analysis to our enquiry on the impact of contractual practices on the wealth of the public domain, I will consider the following three dimensions of this private ordering process: first, whether the commodification of information through contracts looks and acts like traditional copyright legislation (legitimacy argument); second, whether it delivers the goods that are expected from traditional legislation (the effectiveness argument); and third, whether it fills the institutional role that the traditional copyright laws fill (the symbolic meaning argument).[38]

3.1. LEGITIMACY OF PRIVATE ORDERING

As Madison explains in relation to computer software licenses, licensing is governance of an unusual sort, since it operates at three levels simultaneously. At the level of the individual license, all licenses exert some form of governance, since they determine how information can be used without fear of suit. On a second level, the license for a given element of information typically governs not only the relationship between the information provider and a particular licensee, but also the relationship between the owner and all 'users' of that work. Each user may pay royalties according to a different schedule (or not pay royalties at all), but the license serves as an effective constitution for the domain defined by the licensed information. At a third level, to the extent that all information is subject to licenses and to the extent that those licenses are effectively identical in relevant respects, the on-line distribution of information is effectively governed by the very concept of the license. If no substitute is available for the 'licensed' information, the licensing norm displaces the norms of intellectual property as the relevant applicable law.[39] On this point, Madison adds:

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36. N. Elkin-Koren, *supra* note 27, p. 1185; J.H. Reichman and J.A. Franklin, 'Privately Legislated Intellectual Property Rights: The Limits of Article 2B of the UCC', 147 *University of Pennsylvania Law Review* 875-970 (1999); M.J. Radin, and R. Polk Wagner, 'The Myth of Private Ordering: Rediscovering Legal Realism in Cyberspace', 73 *Chicago-Kent Law Review* 1295-1317 (1998); M.A. Lemley, 'Intellectual Property and Shrinkwrap Licences', 68 *Southern California Law Review* 1239-1294 (1995).
37. *See* for example: J. Freeman, 'The Private Role in Public Governance', 75 *N.Y.U. L. Rev.* 543-675 (2000), at pp. 547-548; M.J. Radin, 'Incomplete Commodification in the Computerized World', in N. Elkin-Koren and N. Weinstock Netanel, *The Commodification of Information*, The Hague, London, New York, Kluwer Law International, 2002, Information Law Series No. 11, p. 4.
38. Madison, *supra* note 26, p. 1030.
39. M.J. Madison, 'Reconstructing the Software License', 35 *Loyola University of Chicago Law Journal* 275-340 (2003), p. 276.

> 'To the extent that this norm extends beyond computer programs to digital works of all kinds and potentially to all copyrighted works, the Copyright Act recedes to an even greater extent. Finally, there is the possibility that the licensing norm itself is internalized by the reader, listener, and user communities such that the world of information production and consumption is regulated informally, even in the absence of formal "legal" enforcement of particular licenses and of norms exogenous to the license itself. Understanding the legitimacy of the licensing norm, as both a formal and an informal governance institution, is important at each of these levels'.[40]

Indeed, a quick survey of the current licensing practices carried out on European operated websites indicates that information providers increasingly tend to restrict or even to prohibit certain uses with respect to the content made available via the Internet, in a manner that goes far beyond the bounds of intellectual property law. Often, the wording of a click-wrap license will seem to imply that the restriction on use of the website's content also extends to the elements of such content that are in principle part of the public domain, because they lack either originality, substantial investment or novelty or because they are no longer protected by any intellectual property right. Other common terms of use that can be found on the Internet prohibit the making of 'any reproduction [of the content] for any purpose whatsoever', clause which purports to restrict the use of protected as well as non-protected material posted on the website.

The establishment of a private ordering system is all the more probable in view of the extensive use of standard form contracts to license information to end-users. Indeed, 'click-wrap' licenses are pervasive in on-line mass-market transactions and purport to bind all users of a work to the terms set by the rights owner.[41] On-line mass-market licenses owe their pervasiveness mainly to the manner in which assent to the terms of use is presumed given on the part of the licensee and to the fact that the license is presented on a take-it-or-leave-it basis. If the user does not agree with the terms he has no choice but to refrain from using the information.[42] If the user does agree with the terms, assent to the contractual obligations contained in the on-line license will typically be inferred from the click of a button on the computer screen or the continued consultation of a website. Whether this way of concluding a contract always meets the criteria of the law is debatable. Nevertheless, even in Europe, 'click-wrap' licenses have been upheld as valid.[43]

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40. Madison, *supra* note 39, at p. 277.
41. Radin, *supra* note 37, p. 4.
42. M.J. Radin, 'Humans, Computers, and Binding Commitment', 75 *Indiana Law Journal* 1125-1162 (2000); D.R. Cahoy, 'Oasis or Mirage?: Efficient Breach as a Relief to the Burden of Contractual Recapture of Patent and Copyright Limitations', 17 *Harvard Journal of Law and Technology* 135-178 (2003), p. 156; Guibault, *supra* note 1, p. 204.
43. *See*: *Association Familles de France v. SA Père-Noël.fr, SA Voyage Père-Noël.fr.*, Tribunal de Grande Instance de Paris, decision of 4 February 2003; *Netwise v. NTS Computers*, Rechtbank Rotterdam, 5 December 2002, in *Computerrecht* 2003/02, p. 149 with annotation by A.R. Lodder, and in *Mediaforum* 2003/15 109-112 p. with annotation by M. Voulon.

As Elkin-Koren explains, the establishment of a private ordering system through mass-market licenses does not share the same justification as the statutory copyright regime.[44] The main reason for this is that the private ordering mechanism follows other values and choices than the public ordering system. The former gives priority to economic power, leaving no room for public interest considerations, which the latter system attempts to arbitrate through the political process or processes in civil society. As a result, the terms of use that are developed through the market system alone are likely to be dominated by the interests of those who enjoy superior economic power. The typical mass-market information license therefore completely foregoes the normal democratic process, to the benefit of the information provider (who enjoy superior economic power) and the detriment of the user.[45] Yet democratic perspectives are called for precisely when private consensual activity affects non-parties to some substantial degree, as 'click-wrap' and 'browse-wrap' licenses purport to do.[46] As such, the use of mass-market licenses that restrict the use of information beyond what the law permits can hardly be reconciled with the basic tenets of the several intellectual property regimes.[47]

3.2. Effectiveness of Private Ordering

The impact of contractual practices on the wealth of the public domain can be further analyzed from the perspective of the effectiveness of the private ordering system, in comparison with the public ordering system. Does the use of contracts in the information trade tend to increase the amount of information available to the public? Does the regime configure a market in the good or service that is more effective at building markets in follow-on goods or services, because transactions costs are reduced or certainty and predictability enhanced?[48] Or does it withdraw from the public domain some elements of information that were until then freely available? An economic assessment of the impact of this type of contractual practice on the supply of information would go far beyond the scope of this chapter. Rather, I will attempt to offer some thoughts on the factors that might be taken into consideration when examining the possible consequences of an increased commodification of information through contracts.

In principle, on-line licensing of information should both reduce transaction costs between information providers and information users, and increase certainty, transparency and predictability for the parties concerned. But is restrictive licensing really necessary – and therefore, efficient and justifiable – for the commercial viability of the information provider? In my opinion, some restrictive licenses could

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44. Elkin-Koren, *supra* note 27, p. 1185.
45. M.J. Radin, *Regulation by Contract, Regulation by Machine*, Stanford Law School, p. 8.
46. Madison 2003, *supra* note 39, p. 318.
47. J.H. Reichman, 'Of Green Tulips and Legal Kudzu: Repackaging Rights in Subpatentable Innovation', 55 *Vanderbilt Law Review* 1743-1797 (2000), p. 1796.
48. Madison 2003, *supra* note 39, p. 326.

be held valid and enforceable. The answer depends on several factors. Among them are the presence or absence of intellectual property protection for the information supplied, the nature of the information, the type of restriction involved, the effect of the restriction on the licensee, the presence of substitutes on the market and the market share of the information provider.

In the absence of any copyright or database protection, the possibility to control the use of non-protectable information through contracts constitutes an important factor in the decision to venture into the production and distribution of commercially valuable information. Otherwise makers of commercial databases and information providers would not invest in the creation of value-added products from the raw facts and data that otherwise compose the public domain. Without the possibility to contractually bind licensees to a certain behavior, the information provider may not gain enough lead-time over his competitors to make his investment worthwhile. The restrictions imposed on the licensee should be commensurate to the commercial aim to be achieved and should not be unreasonably burdensome for the licensee. A clause, which prohibits the licensee to use the data included in a telephone book for spamming purposes or that limits further reproduction and distribution of stock exchange quotes of the day, would probably fall under this category. On the other hand, a clause that would limit the further reproduction and distribution of a collection of laws or of the works of Shakespeare would be, in my opinion, entirely unacceptable. Of course, this is without prejudice to the possible application of the rules on competition, should an information provider abuse his dominant position.

If the information concerned already enjoys copyright or database protection, efficiency reasons justifying the use of restrictive license terms are more difficult to find. Except perhaps as a means to curtail piracy, I see no valid commercial motivation underlying the prohibition imposed on users of copyrighted material from exercising the limitations otherwise permitted under the law. On what economic grounds should licensees be prevented from making reproductions for purposes of quotations, news reports, parodies, research and study? In relation to the efficiency of restrictive software licenses, Madison concluded that '[a]s a basic justification for enforcing a regime of licensing as private governance, however, the efficiency/effectiveness argument is fatally indeterminate'.[49]

Finally, some authors have suggested that theories which regard intellectual property rights are detrimental to the continued flourishing of a public domain of ideas and information understate the significance of the intangible nature of information, and thus overlook the contribution that even perfectly controlled intellectual creations make to the public domain.[50] Considering the lack of democratic process, this argument once applied to the private ordering regime only holds true, in my opinion, provided that a number of conditions are met: that the license is transparent and properly formed; the restrictions on use are commensurate to the commercial

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49. Madison, *supra* note 39, p. 329.
50. R. Polk Wagner, 'Information Wants to be Free: Intellectual Property and the Mythologies of Control', 103 *Columbia Law Review* 995-1034 (2003), p. 1034.

objective to be achieved; the provisions are not unreasonably burdensome for the licensee; and that the user has the choice to access and use the same non-licensed information. If any one of these conditions were missing, there would be a good argument not to enforce the license. If this situation were generalized across the information market, the private ordering system would then have to be rejected as a means to regulate the production and distribution of information, since it would jeopardize the integrity of the public domain.

3.3. SYMBOLIC MEANING

Governance regimes do more than merely regulate and produce goods. They embody the idea that certain activities are so important, to such a broad population, that they ought not to be manifested purely in private transactions. Privatization regimes that undercut that symbolic function by becoming or expressing private, rather than public, ideals are presumptively offensive. Regimes that confirm public ideals are presumptively acceptable.[51] What are 'public' and 'private' values in copyright law? Assuming that the main goal of copyright is to establish a balance between the interests of authors in exploiting their work and society's competing interest in the free flow of ideas, then the regime's inherent limits, like the idea/expression dichotomy, the requirement of originality, and the exhaustion doctrine are normative goals to be pursued and enforced via application of the copyright act, rather than circumvented via carefully drafted licenses. Madison concludes in relation to software licensing, that '[f]rom a symbolic standpoint as well as from democratic theory and effectiveness perspectives, licensing-as-private-ordering cannot be said to be clearly legitimate'.[52]

One must realize that copyright law is but one element of a legislator's overall innovation, cultural, and information policy. The copyright regime must therefore not be examined in isolation from the other elements that constitute the legislator's general public policy objectives. Moreover, under the continental European *droit d'auteur* regimes, the balance established by the legislator is carefully designed so as to acknowledge the existence of the several underlying interests of private individuals and of society as a whole. The legitimate interests reflected in the copyright balance are as numerous as they are diverse, ranging from the protection of freedom of expression and of the right to privacy, to the regulation of competition and industry practice, and to the dissemination of knowledge. Although some of these interests may weigh heavier in the balance than others, the copyright regime forms a coherent structure that has its own functionality within the legislator's general public policy objectives.

The widespread use of standard form contracts has the potential to severely upset the traditional balance established by intellectual property law and of standing

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51. Madison, *supra* note 39, p. 331.
52. Id., p. 332.

as an obstacle to the accomplishment of the full purposes and objectives of the general public policy. These contracts typically attempt to redefine – outside any intellectual property regime – what is protectable subject matter, and therefore legally excludable, and what isn't. For instance, licensors may attempt through standard form contracts to appropriate information that is not protectable subject matter and that should normally remain freely available to everyone, such as non-original creations, or ideas.[53] These contracts also attempt to set other conditions of use than those typically admitted under the intellectual property regimes, a practice which can frustrate the objectives that the legislator intended to pursue when it defined the scope of protection. This is particularly evident in licenses that purport to prohibit the end-user from making any use of the licensed information other than a private copy. These agreements essentially mean that neither the use of the public domain elements included in the information supplied nor the exercise of the limitations on copyright is allowed outside of what the licensor has expressly chosen to authorise.[54] In my opinion, it cannot have been the European legislator's intention to see the inherent limits of the copyright and database regimes or the application of all limitations on copyright contractually put aside at the information provider's will.[55]

4. CONCLUSION

As this chapter demonstrates, there is a growing tendency in continental Europe to distribute information subject to the terms of on-line standard form contracts. The rules on copyright and the general limits on freedom of contract seem insufficient to ensure that the legitimate interests of users of public domain information or of copyrighted material are taken into account in licensing agreements. Even in the absence of any relevant case law examining the legality of mass-market licenses that prevent the use of public domain information or that purport to restrict the exercise of user privileges normally conferred under the laws of intellectual property, there is reason to believe that such licenses would be invalidated only in very exceptional circumstances. As a result, the widespread use of on-line licenses may end up posing a threat to the intellectual property policy objectives and the integrity of the public domain, insofar as they may contribute to displace democratically established public ordering assumptions. This remark holds true whether the contractual arrangement attempts to reserve non-protectable subject matter or purports to restrict the exercise of user privileges normally conferred under the laws of intellectual property. In both cases, such contracts may have the effect of shrinking the public domain to the extent that contractual arrangements expand rights of control over informational works provided by intellectual property law.

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53. D. Zalesne, 'Enforcing the Contract at All (Social) Costs: The Boundary Between Private Contract Law and the Public Interest', 11 *Texas Wesleyan Law Review* 579-607 (2005), p. 600.
54. Madison, *supra* note 39, p. 1030.
55. Guibault, *supra* note 1, p. 298.

Chapter VI

The Public Domain Commodified: Technological Measures and Productive Information Use

Kamiel J. Koelman

This chapter addresses the questions: whether technological measures and their protection contribute to the process of the so-called 'commodification' of information, and how these technological measures affect the size of the 'public domain'. Since confusion often reigns concerning the meaning of 'commodification' and the 'public domain', I will first explain what is understood by these notions. Then, I will investigate the ways in which the newly introduced protection of technological measures may strengthen the information providers' control over the use of information. In doing so, the main focus will be on European law, more specifically on the EU Copyright Directive of 2001.[1] Subsequently, I will explore whether the additional control that technological measures and their legal protection confer on information providers is desirable from an economic point of view. The chapter concludes that there may be credible arguments for the legislature to intervene in order to ensure that the combined application of technological measures and contracts cannot hinder productive usage of non-copyrightable material.

1. COMMODIFICATION AND THE PUBLIC DOMAIN

According to some, information is increasingly being dealt with as a 'commodity'. That is, instead of being regarded as a necessary element for the development of (democratic) society or as an important factor for the personal growth of the individual, information is viewed as a mass-produced good that is 'consumed' rather than learned or enjoyed. Information is regarded merely as an 'asset'. Rather than being valued

1. EC Directive 2001/29 on copyright and neighbouring rights in the information society, 22 June 2001, OJ L 167/10, pp. 10-19 (hereinafter 'InfoSoc Directive').

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 105–119

for its contribution to the public debate, information is valued for its profitability. For information to be 'commodified' in this manner, it must be possible to appropriate its value. For this, information must be tradable. In the following pages, 'commodification' is understood to mean 'tradability' and 'appropriability' of value.[2] Of course, whether the general attitude towards information is actually changing in the direction mentioned above should be investigated by sociologists rather than legal scholars. Being a legal scholar, however, I can comment on the issue whether technological measures and the laws that protect them increasingly allow the appropriation of the value of information usage.

The 'public domain' is another illusive concept that surfaces more and more often in discussions on copyright law.[3] Some understand the public domain to consist of information that cannot be 'propertized' – or 'commodified' – by way of intellectual property law, i.e. information that is not the subject matter of an IP right. Others have a different understanding of the notion. They view material to be part of the public domain if its use falls outside of the IP owner's control – for instance, if a copyright exemption is applicable. In the latter perspective, the same information may be part of the public domain in some circumstances, i.e. where an exemption applies, and outside of it in others. According to yet another current of opinion, any information that is widely available and accessible is in effect in the public domain, irrespective of whether its usage is controllable, either by way of the law or otherwise. In this view, material that is kept secret does not belong to the public domain, whether it is protected by copyright or not. On the other hand, works that are copyright protected, but are widely available – like the contents of books in public libraries – may be considered to be part of the public domain. Similarly, open source software which is, of course, copyright protected, is thought to belong to this domain.[4]

2. RHETORIC

The increasing commodification of information and the shrinking public domain have been the center of attention lately. But why does it matter whether the public domain shrinks or whether information is 'commodified' to a further extent? Perhaps these notions are becoming fashionable because they carry a powerful rhetorical load. If information is regarded as belonging to the public domain, it may be considered as the public's property, or common property *owned by everyone*. A person who takes such information and appropriates it then disowns everyone else. Such a person could

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2. On the many different implications that the notion of commodification, *see*: E. Noam, 'Two Cheers for the Commodification of Information', in N.E. Elkin-Koren & N.W. Netanel (eds.), *The Commodification of Information*, The Hague, London, Boston, Kluwer Law International 2002, pp. 42-60.
3. For a comprehensive 'map' of the public domain, *see* P. Samuelson, 'Digital Information, Digital Networks, and the Public Domain' (2001), available at: <www.law.duke.edu/pd/papers/samuelson.pdf>.
4. Y. Benkler, 'Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain', 74 *N.Y.U Law Rev.* 354-445 (1999), p. 358.

therefore be said to 'steal' the information, which, of course, has a very negative connotation. However, the notion of public domain is sometimes understood as referring to things *owned by no-one*. Consequently, taking something out of that domain – whereby a person claims it as his own property (or 'commodifies' it) – and putting it to good use is a good thing to do. Fewer resources are wasted.[5]

The broad use of the concept of commodification may have similar roots. The main meaning of the word 'commodity' is 'object of trade.' Commodification of information implies that information is treated no differently from goods like steel or cars. Instead of something to learn from or to enjoy, information is becoming something from which entrepreneurs make money. Information is becoming less 'special' than before. The main objective of those producing information is no longer to educate, elucidate or move others – or just to express themselves – but to generate a profit. The making of information is no longer regarded as an art, but, as a production process. According to pessimists, this may cause the quality of the offered information to decline. Of course, this implies that a judgment can be passed about the quality of information products. Such judgment may, however, be very difficult to form objectively. Additionally, the fear has been expressed that the variety and diversity of information products will decrease, since information producers will only cater for a mainstream audience, where the largest profits are expected. All products would therefore be alike.[6]

But again, there is a more optimistic perspective. Some believe that the 'invisible hand' of the market will match supply and demand. Due to the market mechanism, only those information products for which demand exists would be produced. Furthermore, it has been argued that information products will only find their way to those who need them if they are traded on markets. Clearly, in order for this to happen, they have to be objects of trade. In this view, the more information is commodified, the better it is. After all, as the proponents of commodification argue, the collapse of the communist regimes shows that the market mechanism – i.e. a system of private property – is superior to a system of common property. Nevertheless, it is disputable that the market mechanism is indeed the most efficient way to distribute information, even from a hardcore economic point of view.[7] But information is thought to be (to some extent) a public good, that is, that additional use of information occurs without additional

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5. On the different meanings of the notion of 'public domain', *see*: Pamela Samuelson, 'The Challenges of Mapping the Public Domain', in this volume; and E. Lee, 'The Public's Domain: The Evolution of Legal Restraints on the Government's Power to Control Public Access Through Secrecy or Intellectual Property', 55 *Hastings Law Journal* 91-209 (2003), also available at: <www.elee.cc/pd.pdf>.
6. This is, however, disputed by Noam, *supra* note 2.
7. *See* e.g. Nobel laureate J.E. Stiglitz, *Public Policy for a Knowledge Economy*, World Bank, Department for Trade and Industry and Center for Economic Policy Research London, UK, January 27, 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 externalities means that exclusive or excessive reliance on the market may not result in economic efficiency.' Available at: <www.worldbank.org/html/extdr/extme/knowledge-economy.pdf>.

costs. Excluding – or commodifying – the use of information goods therefore does not necessarily lead to maximum social welfare.

In any case, there are contrasting views on the meaning and implications of the notions of commodification and public domain. It may therefore be prudent to avoid these terms while discussing the impact of technological measures and their legal protection. In the following pages, I will investigate to what extent technological measures and their protection increase the control over information usage. Despite partial overlap between the topics, a distinction will be made between the scope of control over *types of use* and the scope of control over *types of information*. The impact of those aspects may be different, as may the valuation of that impact. It will be shown that the main change brought about by increasing control over types of use is that consumptive use becomes more excludable, whereas control over more types of information affects productive information use. While it remains uncertain whether additional control over consumptive use is desirable, it can convincingly be argued that extra control over productive use is not recommendable.

3. CONTROL OVER USE

It has often been said that the effects of the application of technological measures are in many ways similar to the effects of copyright law. By allowing a rights owner to exclude others from using information, both the law and technological measures put him in a position to demand payment for that use. A major difference between the two regimes is that, contrary to copyright, which contains many limitations, technological measures empower a rights holder to control *any* use.[8]

The legal protection of technological measures, as introduced in the US and in the EU, sanctions the expanded *de facto* control that technological measures provide. This is because the law prohibits the circumvention of technological measures even if such circumvention is meant to enable the exercise of an act that does not constitute an infringement of copyright. In the US, technological measures that control access may not be circumvented.[9] Thus, a license is required for accessing an encrypted work, which allows a rights holder to charge for mere access. Of course, 'classical' copyright law did not allow him to charge for access to, or consultation of, a work. In the EU, it is prohibited to circumvent for any purpose – including, apparently, for the purpose of accessing a work – for which a user does not have the rights owner's permission.[10] Consequently, the protection of technological measures facilitates the

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8. *See* e.g. K.J. Koelman, 'The Protection of Technological Measures vs. the Copyright Limitations', *Copyright World* August (2002), pp. 18-22.
9. Article 1201 of the US Copyright Act.
10. Article 6 of the InfoSoc Directive. According to earlier drafts of the InfoSoc Directive, technological measures which 'inhibit infringements' would have been protected. The enacted version of Article 6 of the InfoSoc Directive, 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 accompanying the Common Position by which the new definition of technological measures

appropriation of the value of any type of use over which a rights holder exercises technological control. Whether the use constitutes an infringement under copyright law makes no difference. Clearly, therefore, more types of use may be commodified than was the case under 'classical' copyright law.

Typical acts of commercial exploitation have always been covered by copyright law: the rights holder could object to the making of reproductions by (potential) competitors and to the commercialization of the work, e.g. through distribution or broadcast. To the extent that technological measures prevent such acts, they do not increase the 'commodifiability' of use. Generally, however, the consumption or private use of a work did not constitute an infringement and therefore fell outside the scope of control that a rights holder could exercise. To read a book, for instance, never was an infringement, even if the copy was pirated. The prohibition on the unauthorized accessing of technologically protected works now confers to copyright owners the statutory right to control use by mere end-users and, thus, to extract payment directly from them.

From a strictly copyright perspective, this may seem a revolutionary change. But from a broader perspective, the significance of the change may be toned down somewhat. Although, until now, copyright owners could not prohibit the mere 'consumption' of works, other parties in the information distribution chain have long been in a position to control access by end-users. Movie theaters, for instance, can only be accessed through the box office, and, thus, movies are exploited on a pay-per-use basis. The doctrine of trespass provides a theater owner with the legal leverage to set conditions on access. The main difference would be that the newly introduced protection of technological measures statutorily puts another party – i.e. the rights owner – in the position to exercise control directly over end-use. But the control that this party can exert is somewhat similar to the control that a theater owner has.

However, digital rights management (DRM) systems also provide control over use that previously could not be restrained, like the consultation of a product that is in the user's possession. Users of e-books can be billed per page read, instead of per book bought, even if the file containing the book resides on their own hard drive. Another important difference is that a theater owner can merely control access to a particular *performance* of a work, while the copyright owner can statutorily control access to the *work*, which is a broader concept. In this sense, the latter's control is more extensive. However, this aspect may better be dealt with in the context of the following section. In any event, the main change brought about by the fact that the

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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.' 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, 1 December 2000, (2000/C 344/01), Statement of the Council's Reasons, No. 42, p. 19.

protection of technological measures allows rights holders to exclude more use, seems to be that statutorily they now have control over consumptive use.

4. CONTROL OVER INFORMATION

Apart from more types of use, technological measures also allow control over more types of information. Generally, this will only be feasible if DRM systems are used in combination with enforceable contracts. A technological protection measure cannot by itself prevent others from re-using non-copyrightable elements of a technologically protected product once they have accessed it. One can, for example, easily take the ideas expressed in a product and do with them as one pleases. A DRM system cannot prevent that. But, like a know-how licensor who can set conditions on the use of non-copyrightable information because he controls the access to the (secret) information, an information supplier who applies technological measures can set up a scheme in which a contract must always be concluded before a customer can access the information. The contract will then state that the seller's permission is needed for any use of any element of the information product, regardless of whether it is protected by an IP right.[11] Thus, technological measures may support the control of information that is not the subject matter of copyright (nor secret) and will thereby increase the control over types of information.

At first glance, the legal protection of technological measures appears to coincide with the scope of copyright, because technological measures are not protected if they hinder the use of non-copyrightable material.[12] In such circumstances, they may lawfully be circumvented. In practice, however, this limitation of the protection of technological measures may not be very meaningful. First, because most – if not all – information products consist of a mix of copyright protected and non-protected elements, while the applied DRM system prevents the use of both kinds of elements. If one circumvents the system, one gains access to both the non-copyrightable and the copyrightable material. Probably, judges will hold that the act of circumventing a DRM system that is applied to such a mixed product is unlawful under the protection of technological measures, because the person performing this act (also) gains access to the copyright protected material without the owner's permission.[13]

Second, even if a technological protection layer only hinders the use of non-copyrightable material or if circumvention were permitted in cases where a DRM system protects both content that is the subject matter of copyright and material that is not, many people would be unable to break through the technological protection layer. This is because the tools necessary for doing so are prohibited and therefore

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11. P. Samuelson, 'Technological Protection for Copyrighted Works' (1996), pp. 23-25, available at: <www.sims.berkeley.edu/~pam/courses/cyberlaw97/docs/techpro.html>.
12. *See* Article 6(3) of the InfoSoc Directive.
13. Indeed, while implementing the Directive, the Dutch Minister of Justice stated that a technological measure may not be circumvented if it protects both copyrightable and non-copyrightable material. Handelingen Tweede Kamer 11 February 2004, p. 50-3346.

hard to obtain.[14] Probably, the same DRM systems will be used for protecting both copyrightable and non-copyrightable products. Consequently, circumvention devices which allow the decryption of content that is not the subject matter of copyright, will also facilitate the circumvention of technological measures that prevent acts with respect to copyrightable content. It is not inconceivable that judges would hold that such 'dual-use' devices are prohibited, because if they do not, most circumvention devices would freely be available and the protection of technological measures would be rendered meaningless. Anyone could then easily obtain them and engage in unlawful circumvention. But if circumvention devices are not available, people who lack the technical ability to circumvent on their own can only access the non-copyrightable content with the consent of the party who controls the key to the technological lock. Thus, the prohibition on circumvention devices may indirectly provide the legal leverage for setting conditions on access to, and use of, material that is not the subject matter of copyright.

5. ECONOMIC VALUATION

The combined application of technological measures, their legal protection and the use of contracts facilitates the exclusion of more types of use and of more types of information. Is this a good or a bad thing? Of course, for a normative judgment to be made, one needs to choose a normative framework from which to pass that judgment. As the notions of commodification and of the public domain are somewhat tainted and unclear, economic theory will be applied in order to assess whether the developments sketched above are desirable. Will the additional control enhance social welfare? Here, again, a distinction is made between control over types of use – or consumptive use – and control over types of information – or productive use. In the first case, it is uncertain whether the extra control is undesirable; in the second, it may well be argued that more control is not recommendable.

Additional control over consumptive use may, from an economic point of view, not be very problematic. Economists consider the main benefit of the excludability of information – i.e. of copyright – to be that it enhances the availability and accessibility of information products. Therefore, if the extra control provided by DRM systems were to cause fewer information goods to be available and information to be generally less accessible, this would not be economically justifiable. Clearly, if prices were to rise due to the application of technological measures and their protection, which, after all, enable rights owners to demand payment for use in more instances, information would become less accessible. However, it remains to be seen whether (the protection of) technological measures will actually cause consumptive use to become more expensive.

According to some, information suppliers will likely want to sell to as many consumers as they possibly can and will therefore offer information use at prices

14. *See* Article 6(2) of the InfoSoc Directive.

that consumers are willing to pay. Consequently, there would be no need to fear that use would become too expensive. The market mechanism would match the supplied use restrictions and demand.[15] Moreover, if a rights holder decided, for instance, to block copying, he would be able to offer the product cheaper. Consumers who did not plan to copy the work anyway would then buy it, while they may not have purchased the product at the higher price that might have been charged if copying were not hindered. Concomitantly, additional control over information use could even enhance the accessibility of information.[16] Furthermore, and in relation to the above, some commentators assert that the extended possibilities for engaging in price discrimination that technological measures provide could also contribute in fulfilling the demand, which, however, implies that information would become more accessible.[17] Currently, users who do not value a book enough to buy it may borrow it from a library. In future, DRM systems may enable rights holders to set up similar schemes themselves. Low-value users would buy a cheaper version that can be accessed for just a short time, while high-value users would purchase a more expensive version that lasts longer. Thus, one can argue, technological measures (and their protection) will not necessarily reduce the accessibility of information.[18]

However, positive outlook will only hold if all conditions for a perfectly functioning market are satisfied. Economic theory predicts that the market mechanism will only lead to optimal efficiency if all parties to a transaction are perfectly informed. If they misjudge the value of a good, the market price will be too high or too low. Therefore, production and consumption will not reach the optimal level. Market forces would then not balance the supplied use restrictions with the demand. From an economic perspective, information deficiencies would appear to constitute the main reason for limiting the freedom of contract in the relationship between a seller and a consumer or for curtailing the freedom to technologically block mere consumptive

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15. *See* e.g. F.H. Easterbrook, 'Cyberspace and the Law of the Horse', 1996 *University of Chicago Legal Forum* 207-216 (1996), 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.'
16. T.W. Bell, 'Fair Use vs. Fared Use: The Impact of Automated Rights Management on Copyright's Fair Use Doctrine', 76 *North Carolina Law Review* 557-619 (1998). An argument against this line of reasoning could be that, since information products are public goods, additional use (or copying) would occur at no additional cost. Therefore, the seller would not necessarily have to charge a higher price for versions that can be copied.
17. *See* e.g. 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*, New York, CopyCo Printing Inc. 2002, p. 89 ff.; W.W. Fisher III, 'Property and Contract on the Internet', 73 *Chicago-Kent Law Review* 1203-1256 (1998), pp. 1234-1240.
18. It must be noted, however, that the issue of whether price discrimination actually enhances social welfare has not yet been settled. According to several commentators, there are many circumstances under which price discrimination has a negative impact. *See* e.g. J. Boyle, 'Cruel, Mean, or Lavish? Economic Analysis, Price Discrimination and Digital Intellectual Property', 53 *Vanderbilt Law Review* 2007-2039 (2000); M.J. Meurer, 'Copyright Law and Price Discrimination', 23 *Cardozo Law Review* 55-145 (2001); J.E. Cohen, 'Copyright and the Perfect Curve', 53 *Vanderbilt Law Review* 1799-1819 (2000).

use. That is to say, the increasing exclusion of information use may not be the main problem. In fact, sellers may restrict any use they see fit, as long as consumers know that it is restricted and, thus, what exactly they are paying for.

Nevertheless, since consumers may often be unaware of the technologically enforced use restrictions, some kind of consumer protection could be necessary. Interestingly, presumably for this purpose, the German legislator inserted an obligation for rights holders who apply DRM systems to make very clear which use is restricted.[19] But even if consumers have to scroll through a license before a contract is concluded which conspicuously lists the uses that are technologically blocked, it is likely that they will not take notice of the terms of the contract. In low-value transactions, the costs of studying complicated contracts and of comparing different offerings often are higher than the expected benefits. Consumers may therefore misjudge the value of the product. Indeed, this could provide a reason for the legislature to intervene and to declare non-binding clauses in consumer contracts, which end-users would never have agreed to if they had known them.[20] A precedent for such legislation may be found in the EU Directive on Unfair Terms in Consumer Contracts of 1993, which contains a list of presumably unfair clauses that the EU Member States must declare invalid.[21] Of course, with regard to technological measures it would not suffice to provide that certain terms are non-enforceable in court, as does this Directive. DRM systems enforce the terms of the license themselves. Therefore, a prohibition on the technological blocking of certain uses would be necessary. It will, however, not be easy to draw up a list of use restrictions consumers would never have agreed to, since it probably depends on the price whether they consider a restriction acceptable.

Another requirement for the market mechanism to lead to an optimal result is that perfect competition exists. If sellers collude or if they have a dominant position in the relevant market, it is unlikely that the forces of competition will result in them offering use at competitive prices. This is where the enhanced control over productive use may be problematic, because it may undermine competition to an even further extent than copyright law already did. Under 'classical' copyright law, the rights holder has a limited monopoly – which is considered necessary in order for him to recoup his investments. In order to provide an incentive to create, and, thus, to enhance the availability of information goods. But rights owners generally cannot prevent others from entering the market with products that consumers consider reasonable substitutes, because an infringement claim does not succeed if the two products do not show sufficient similarity.[22] Additionally, ideas and mere factual

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19. *See* the new Article 95d of the German Copyright Act. If a rights holder fails to clearly reveal the characteristics of a technological measure, the user may file for damages.
20. *See also* K.J. Koelman, 'Copyright Law and Economics in the Copyright Directive: Is the *Droit d'Auteur* Passé?', *International Review of Intellectual Property and Competition Law* (IIC) 633-636 (2004).
21. Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts, OJ L 95, 21.04.1993.
22. Probably, 'classical' copyright mostly causes a situation of so-called 'monopolistic competition', i.e. the offered products are not identical, but they nevertheless compete for the consumer's

statements are not the subject matter of copyright, because if they were, copyright owners could monopolize the relevant market by blocking any reasonable substitute for their own product. The protection of ideas would expand the rights holder's market power, since the more abstract the copyrightable elements are, the sooner similarity and, thus, infringements would be found. Factual statements are either accurate or inaccurate. Therefore, reasonable substitutes for factual information simply do not exist.

As explained above, a combination of contracts and technological measures could empower a seller to control the use of unprotected components of information products. A DRM system enables the rights owner to allow access only to those who agree to a contract stipulating that the seller's permission is required for the re-use of any element, either copyrightable or non-copyrightable, of the product. The seller could then prevent competitors from offering reasonable substitutes. But he could also set conditions on productive use more often, which would, in turn, cause such use to become more expensive. Since information production is thought to be a cumulative process – i.e. second-generation creators always (have to) build upon the work of their predecessors – this would likely result in fewer new products being published.[23] Fewer information products would then be available. Moreover, the products which would still reach the market would have to cost more, which could reduce their accessibility. In summary, even if additional control vis-à-vis mere end-users may not necessarily pose a problem, extended control as regards productive use may well be undesirable.

Although the most important issue seems to be that the subject matter of copyright may indirectly be broadened, some of the statutory exemptions may also be viewed as promoting productive use by preventing the rights holder from hindering the creation of new works. Of the exhaustive list of exemptions of Article 5 of the InfoSoc Directive, only the exemptions permitting use for the purpose of scientific research, quotations and parody belong to this category.[24] The exemptions allowing public lending and private copying may be considered as indirectly fostering productive use; they ensure that next-generation creators are able to access works in order to get inspired by, and build upon them. But if a person who borrowed a book or made copies for personal use intends to create and exploit a new work based on a borrowed or copied original, he can only use copyrightable elements if he acquires a license permitting their use. Thus, even though some of the copyright exemptions may be seen as encouraging productive

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attention. *See* R.P. Merges, 'Intellectual Property Rights and the New Institutional Economics', 53 *Vanderbilt Law Review* 1857-1877 (2000).

23. *See* W.M. Landes & R.A. Posner, 'An Economic Analysis of Copyright Law', 18 *The Journal of Legal Studies* 325-33, 344-53 (1989), p. 348.

24. Of course, the exemptions allowing reverse engineering and decompilation for the purpose of interoperability are also inserted to ensure that competition is not unduly hindered. However, for reasons of clarity and brevity and because the InfoSoc Directive of 2001 does not deal with software copyright or technological measures applied to software, those exemptions are not dealt with in this chapter.

use, the limit on the protectable subject matter of copyright is probably by far the most important limitation promoting such use.

6. REGULATION

The main problem is that a combination of technological measures, their protection and contracts allows information sellers to exclude the use of more elements of information products. It is as if more material is becoming subject matter of copyright, while it is primarily the limit on the protectable subject matter that restricts the market power of the rights owner. This development could well conflict with copyright's main economic policy goals – i.e. it may cause the availability and accessibility of information products to decline. There may be valid arguments for the legislator to intervene and to curtail the freedom to contractually exclude productive use of non-copyrightable material. However, even though the legislator, both in the US and the EU, has taken into account some of the copyright limitations while introducing the legal protection of technological measures, he failed to see that it might be necessary to prevent information sellers from applying DRM systems and contracts in order to control the productive use of material that is not the subject matter of copyright.

The US Copyright Act authorizes the circumvention of technological measures that control access for a limited set of purposes. The exemptions that allow circumvention for the purposes of encryption research and reverse engineering may foster productive use, but just in the area of software development. No provisions are included to promote productive use as regards 'mere' 'literary and artistic' works. Under the EU InfoSoc Directive there is no similar 'right to crack', but under certain circumstances rights holders may be forced to facilitate the use covered by some of the copyright exemptions. However, there is no obligation to facilitate such use if the work is made available through an on demand service, whereby the user contractually agreed that the seller's permission would be necessary to benefit from the exempted use. The only exemption that directly supports productive use for which the Directive requires Member States to introduce such an obligation is the one permitting the use for scientific research. The EU Member States implemented various mechanisms through which users may demand that the exempted use be facilitated. In Germany, a user may ask a court to order the rights holder to facilitate the use concerned. In Spain and France, complicated procedures are proposed, while in Austria and the Netherlands the legislator merely provides that some kind of administrative procedure may be introduced at a later stage.[25]

Neither the EU nor the US legislator inserted a provision that prohibits information sellers from controlling the productive re-use of non-copyrightable material.

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25. *See*, for an overview of the various ways in which the EU Member States implemented the protection of technological measures prescribed by the InfoSoc Directive: <euro-copyrights.org> and <cyber.law.harvard.edu/media/eucd>.

The omission is even more remarkable as the legislator did not always turn a blind eye to such concerns. The EU Software Directive of 1991, for instance, states that reproductions necessary 'to observe, study or test the functioning of [a computer] program in order to determine the ideas and principles which underlie any element of the program' are not infringements and that this exemption cannot be overridden by contract.[26] If these reproductions were covered by copyright, a combination of technology, contracts and the law would have empowered the rights holder 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. A decade later, in the InfoSoc Directive of 2001, the EU legislator added that the protection of technological measures may not render this exemption of software copyright meaningless.[27]

Another interesting precedent is the European Commission's recently updated Regulation on technology transfer agreements.[28] Technology IP licenses may violate EU anti-trust law because they may contribute to collusion among firms. The Regulation clarifies under which circumstances technology transfer licenses do not violate the anti-cartel provision of Article 81 of the EC Treaty. Additionally, it lists so-called 'hardcore restrictions,' which do breach anti-trust law. Apart from patent and software copyright licenses, know-how (or trade-secret) licenses are also covered. For a know-how license to be exempted from anti-trust law under the Regulation it must restrict the use of secret information, i.e. information that is not generally known or easily accessible. This could imply that the Commission finds the restriction on use of information that is in the public domain undesirable. The Regulation goes on to state that licenses between (potential) competitors which prevent the licensee from exploiting his own technology or from carrying out research and development are considered hardcore restrictions and are therefore null and void. Apparently, the situation must be avoided where a licensor prevents a licensee from entering the market with substitutes for the licensed technology. In other words, a licensor ought not to be able to monopolize a market by applying factual exclusivity (secrecy) and contracts.

One could perhaps argue that the issue raised in this chapter should indeed be dealt with in competition law. The Regulation, however, only applies to software copyright and other technology licenses. It is not applicable to licenses concerning real 'literary and artistic' works. Thus, it cannot solve the problem discussed above. Moreover, one may question whether this Regulation, that is based on the EC Treaty's anti-cartel provision, is the appropriate place to cope with it. The Treaty's provision concerns the situation where several parties concert together in order to undermine competition, whereas the issue here is that one party applies DRM systems and contracts in order to enlarge just his own market power. The problem of the increasing

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26. Articles 5(3) and 9(1) of Council Directive of 14 May 1991 on the legal protection of computer programs (91/250/EEC), OJ L 122, 17/05/1991, pp. 42-46.
27. Recital of 50 of the InfoSoc Directive.
28. Commission Regulation (EC) No 772/2004 of 27 April 2004 on the application of Article 81(3) of the Treaty to categories of technology transfer agreements, OJ L 123, 27/04/2004, pp. 11-17.

excludability of productive use could also be dealt with under Article 82 of the EC Treaty, which prohibits an undertaking from abusing a dominant market position. However, as one commentator argues, it may be costly and even 'schizophrenic' to, on the one hand, encourage far-reaching control over information use – in this case, by the legal protection of technological measures – and to, on the other hand, limit that control by way of anti-trust law.[29]

It may therefore be preferable to provide in the body of copyright law that the exclusivity based on technological measures cannot be applied for excluding the use of non-copyrightable (and non-secret) material. As explained above, DRM systems cannot by themselves block productive use of non-copyrightable elements. Control over such elements would ultimately be based on contractual agreements. Therefore, a legislative provision would have to target clauses which prohibit the productive use of non-copyrightable content. But it will not be an easy task to draft a norm that prohibits the contractual exclusion of use of non-copyrightable material without at the same time disallowing the current practice of know-how licensing.[30] 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 considered secret, a license limiting the use of components which are not the subject matter of copyright would be null and void. However, the interface between know-how licensing and copyright licensing is not yet very well understood. This is an area that requires further research.[31]

7. FREEDOMS OF EXPRESSION AND INFORMATION

Of course, instead of economic theory, other normative frameworks could be applied. The issues could also be analyzed in the context of the freedoms of expression and information (here, I understand the freedom of information to include the freedom to access privately controlled information). One could argue that the extended control over information could undermine those freedoms and therefore is unwanted. If use

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29. *See* G. Ramello, 'Copyright and Antitrust Issues', in: W. Gordon and R. Watt (eds.), *The Economics of Copyright, Developments in Research and Analysis*, Oxford, Edward Elgar Publishers Ltd. 2003, also available at: <ssrn.com/abstract=352760>, 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.'
30. Of course, a presumption here is that the practice of licensing secret know-how is desirable. Probably, if licenses curtailing the use of non-IP-protected information were disallowed, the information would be shared less, which may be considered unwanted. *See*, on the economics of trade secret law, D.D. Friedman, W.M. Landes & R.A. Posner, 'Some Economics of Trade Secret Law', 5 *Journal of Economic Perspectives* 61-72 (1991); R.G. Bone, 'A New Look at Trade Secret Law: Doctrine in Search of Justification', 86 *California Law Review* 241-305 (1998).
31. One issue may be that, under the proposed criterion, information sellers could be incited to offer their products to a smaller public, as they could then apply more stringent terms. Clearly, this would not help the accessibility or availability of information.

is increasingly excludable, users may have to pay for use more often, which could reduce the accessibility of information and could therefore be said to conflict with the freedom of information – or, for that matter, affect the public domain in the sense that information becomes less accessible.

In practice, a seller of unauthorized pay TV decoders invoked the protection of Article 10 of the European Convention of Human Rights, which protects the freedom to impart and receive information. He contended that the decoders merely enabled others to enjoy their fundamental right to receive information. However, the Dutch Supreme Court simply held that this provision does not cover the reception of television programs that are scrambled in order to ensure that users pay for accessing them.[32] Indeed, it would appear incongruous if an information provider could be compelled to facilitate mere consumptive use on the basis of the freedom of information. It would be as if this right could serve as a defense for stealing a book from a bookshop or for breaking into a theatre. That is not to say that a legislator should never take the freedom of information into account. If information products were to become inaccessible to many, one could argue that the legislator should intervene, because the broad accessibility of information is indispensable to the functioning of a democratic society.[33] But, as explained above, according to some scholars, the application of technological measures will not necessarily lead to a society in which information use is more expensive and, thus, less accessible. Therefore, it remains to be seen whether government intervention really is necessary.

The freedom of expression may be analyzed along similar lines as the productive use from the economic approach. Clearly, control over the dissemination of ideas or facts would be to the detriment of public discourse and therefore could be viewed as unduly hindering the freedom of expression. Additionally, some of the copyright exemptions may be analyzed as serving the freedom of expression – in particular exemptions allowing copying in news media and quotations.[34] To the extent that the protection of technological measures directly hampers such use or indirectly supports the control over mere ideas and facts, it may be said to hamper the freedom of expression. Arguably, the legislator should ensure that the freedom of expression is not excessively hindered by the application or the protection of technological measures.

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32. Dutch Supreme Court, 17 December 1993, *NJ* 1994, 274 (*Groeneveld/TDS*).
33. In fact, the European legislator did introduce a norm for this purpose. *See* Article 3a(1) of European Parliament and Council Directive 97/36/EC of 30 June 1997 amending Council Directive 89/552/EEC on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the pursuit of television broadcasting activities, OJ L 202/60. The provision states that EU Member States may decide that broadcasts of 'major importance for society' may not be made subject to access control. The European Member States drafted lists of such broadcasts which must be available on open channels. Mostly, however, these are programs on major sports events.
34. *See* L.M.C.R. Guibault, *Copyright Limitations and Contracts – An Analysis of the Contractual Overridability of Limitations on Copyright*, The Hague, London, Boston, Kluwer Law International, 2002, pp. 29-46.

8. CONCLUSION

Compared to 'classical' copyright law, technological measures and their legal protection allow information sellers to control more kinds of use of information and the use of more types of information. Thus, sellers may appropriate the value of use in more instances. It is unclear whether increasing control over consumptive use – i.e. the ability to extract payment directly from end-users – will actually reduce the accessibility of information. Problems as regards consumptive use appear to be mostly related to the information deficiencies that the increasing complexity of information transactions may cause.

Additional excludability of productive use is more likely to have an undesirable effect. It may increase the costs of creating next-generation products. As a consequence, fewer information products would become available. Moreover, the products that would still reach the market, would probably be more expensive, and thus be less accessible. From an economic viewpoint, the main issue appears to be that a combination of technological measures, their protection and contracts allows information sellers to more often prevent competitors from offering reasonable substitutes and to set conditions on productive use of non-copyrightable elements. This would be comparable to a further expansion of the copyright protection to cover more types of information, which would result in fewer next-generation products becoming available. Arguably, it may be advisable that the legislature prevents information providers from expanding their market power by applying the leverage provided by technological access control for demanding payment for the productive re-use of non-copyrightable material.

In terms of the 'public domain' and of 'commodification,' one could say that due to (the protection of) technological measures, more information use is becoming commodifiable, as are more types of information. The latter may result in the public domain – in the meaning of the pool of information that next-generation creators may freely use – to swell more slowly than it did under 'classical' copyright. This could result in fewer information products becoming available. Moreover, those products that would still be offered would probably be more expensive, which, in turn, could cause the public domain – now in the sense of the information that is readily accessible to the public – to shrink.

Chapter VII

Copyright, Commodification, and Culture: Locating the Public Domain

Julie E. Cohen

1. COMMODIFICATION AND THE PUBLIC DOMAIN: FOUR PUZZLES

The relationship between increased commodification and the public domain in copyright law is the subject of considerable controversy, both political and theoretical. Critics of commodification, for the most part academics and artists, assert that the inexorable expansion of copyright rights threatens the continued viability of a robust public domain. Proponents of this expansion, including representatives of the large copyright industries but also some academics, have two responses. First, they assert that commodification promotes greater public access to expressive works; that is, after all, the whole point. Second, they argue that the claimed nexus between commodification and the public domain is in fact a *non sequitur*: more perfect commodification of information that is currently copyrighted in no way undermines public access to and use of information that is not.

This debate has a curious quality. At first examination, the parties seem to be talking past each other. One side posits a powerful inverse relation between the proprietary and the public, while the other side does not seem to think it is necessary, when evaluating the practical and theoretical desirability of commodification, to talk about the public domain at all.[1] On closer inspection, however, the position staked out by proponents of commodification also rests on a set of implicit claims about

1. In reality, of course, each side encompasses a spectrum of positions. Not everyone in the former group supports all measures that would weaken copyright, and not everyone in the latter group supports all measures that would strengthen it. In general, I will use 'pro-commodificationist' to refer to those who believe that copyright should be long and strong and 'anti-commodificationist' to refer to those who believe that it is too long and too strong already.

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 121–166

the nature and function of the public domain. But the pro-commodificationists and the anti-commodificationists do not understand the public domain the same way.

Four puzzles illustrate this gap in perception:

The first puzzle concerns copyright duration. Observing that every year added to the term of copyright is a year withheld from the public domain, anti-commodificationists argue that such extensions represent a threat to the public domain that is clear and direct. For pro-commodificationists, this is not an argument against commodification, but one that overlooks its considerable benefits. They observe that the copyright system is intended not only to stimulate creativity, but also to promote public access to creative works. Term extension, which enables additional years of productive use for older works, serves the latter purpose. More generally, they note that the existing public domain is, after all, quite large; how can extending the terms of current copyrights, which are not 'in the public domain,' threaten what is already 'there'?

The second puzzle concerns the exemptions, or privileges, that users of copyrighted works traditionally have enjoyed under copyright's system of limited exclusive rights. More perfect commodification requires narrowing and possibly eliminating some or all of these privileges. Anti-commodificationists argue that this narrowing will disrupt the proper balance between the proprietary and the public. Implicitly, then, and sometimes explicitly, they claim that copyright's system of exemptions and user privileges forms part of the public domain.[2] Although many adherents of commodification support retaining particular user privileges, they do not understand this argument. Copyrighted works, self-evidently, are not 'in the public domain,' so how can uses of them be?

The third puzzle concerns copyrightable subject matter. Within the last three decades, the dynamic of commodification has supported the extension of copyright protection to a variety of materials, including computer program interfaces, statistical indices, taxonomies, and artistic styles. Citing the truism that copyright does not extend to ideas, facts, systems, procedures, or methods of operation, the anti-commodificationists argue that these extensions amount to improper appropriation of the public domain building blocks of knowledge and creative expression. Pro-commodificationists find this claim curious. How can these things be 'in the public domain' when they are concrete expressions of more general ideas and were only recently brought into being?

The final puzzle concerns the effect of Digital Millennium Copyright Act's (DMCA) anti-device provisions on the public domain. More perfect commodification requires more perfect control over access to copyrighted works. The DMCA seeks to strengthen such control by prohibiting the tools that one might use to evade

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2. For examples of explicit claims, *see* Y. Benkler, 'Free as the Air to Common Use: First Amendment Constraints on the Enclosure of the Public Domain', 74 *N.Y.U L. Rev.* 354-445 (1999), p. 393 (arguing that the public domain encompasses those fair use entitlements that are clear and universally applicable), and P. Samuelson, 'Mapping the Digital Public Domain: Threats and Opportunities', 66 *L. & Contemp. Probs.* 147-171 (2003) (describing fair use as a 'contiguous territory' to the public domain).

control. Anti-commodificationists object to this broad prohibition, in part because it allows technical protection systems to override user privileges, and in part because it frustrates public access to public domain content that is subject to technical protection. They assert that the DMCA effectively removes this content from the public domain. Here again, the pro-commodificationists profess themselves bewildered. As long as the content is available somewhere in non-copy-protected form, how can its publication in copy-protected form threaten the public domain? How can you 'remove' a work from the public domain when it's already 'there'?

The exact location of the dividing line between the proprietary and the public is formally a question of policy, but these puzzles suggest that metaphorically-driven conceptions of what a 'public domain' is, and what it is not, play an important role in determining the answer.[3] To evaluate the effects of increased commodification on the public domain, and on the flow of information more generally, we may first need to examine more closely the extent to which the metaphor of a 'public domain' itself shapes assumptions about which aspects of artistic, intellectual, and informational culture[4] are public. I will argue that the metaphor in fact describes the public aspects of such culture rather badly.

Part 2 traces the history of the public domain metaphor in US copyright law. It argues that, when considered in broader historical context, the term 'public domain' has a specific set of denotative and connotative meanings that constitute the artistic, intellectual, and informational public domain as a geographically separate place, portions of which are presumptively eligible for privatization. This idea meshes well with the push toward commodification, and is one of the reasons that the pro-commodificationist interpretation of the relationship between the proprietary and the public has proved so robust.

Part 3 tests this metaphorical construct of the public domain against descriptive and theoretical accounts of the ways that forms of artistic expression develop. The theoretical models of creativity that dominate copyright discourse do not adequately acknowledge the contingent, socially embedded nature of creative processes. Creative practice is opportunistic, indiscriminate and centrally dependent on the borrowing and reworking of encountered objects and techniques. Creative practice is also

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3. Some legal scholars argue that, at least in the US, the Constitution dictates a specific structure for the public domain. This paper takes no position on that subject; its goal simply is to interrogate the extent to which one's views about the appropriate legal definition of the public domain depend on what one imagines a 'public domain' to be. For a summary of the literature addressing the constitutional questions, *see* D. Leenheer Zimmerman, 'Is There a Right to Have Something to Say? One View of the Public Domain', 73 *Fordham L. Rev.* 297-376 (2004).

4. The meaning and appropriate uses of the term 'culture' are hotly contested among anthropologists and sociologists. *See,* e.g., C.M. Kelty, 'Punt to Culture', in C.M. Kelty (ed.), *Culture's Open Sources: Software, Copyright, and Cultural Critique*, 77 *Anthropological Q*. 547-558 (2004); N. Mezey, 'Law as Culture', 13 *Yale. J.L. & Hum*. 35-67 (2001). I do not mean to take sides in that debate, nor to suggest that law is somehow external to culture; to the contrary, I argue that the two are entangled. As Kelty acknowledges, sometimes one simply needs a word to use. Here, I use the terms 'culture' and 'artistic culture' as shorthand for the universe of artistic, intellectual, and informational artifacts and practices.

fundamentally contextual, social and relational. Constructing a theoretical model of creativity that takes adequate account of these aspects of creative practice requires not an economics or a biology of creativity, but rather a sociology. Attention to the social parameters of creative practice suggests an understanding of the development of artistic culture that is quite different from that implicit in the pro-commodificationist model. The common in culture[5] is not a separate place, but a distributed property of social space. If we as a society want to facilitate the development of artistic culture, copyright doctrine should recognize rights of access to the common in culture to a far greater extent than it currently does.

Part 4 offers a different organizing metaphor for the relationship between the public and the proprietary that matches the theory and practice of creativity more accurately: The common in culture is not a geographically separate domain, but rather the cultural landscape within (and against and through) which creative practice takes place. When this is acknowledged, the other half of the 'public domain' metaphor also dissolves. Just as the cultural landscape is not geographically separate, so it is not comprised only of materials that are 'public' in all respects. This in turn suggests a need to recalibrate the doctrines that determine the scope of a copyright owner's rights during the copyright term, particularly those that establish the right to control the preparation and exploitation of copies and derivative works.

2. THE CONSTRUCTION OF THE PUBLIC DOMAIN: A BRIEF HISTORY OF AN IDEA

What modern models of the public domain have in common is an implicit understanding of the public domain as a geographically separate preserve encompassing the old, the archetypal, and the unproductive. This understanding is neither necessary nor inevitable, and may not have been intended by those who first adopted the term to refer to aspects of culture that are commonly owned. It is, instead, the product of a historical contingency: our understanding of the common in culture has become deeply rooted in the preexisting history of the term 'public domain' in US public land law. This territorially-determined vision of the public domain enables pro-commodificationists to assert, quite truthfully from their perspective, that commodification has no effect on the public domain whatsoever, and disables anti-commodificationists from mounting an effective challenge.

5. I use this term provisionally to designate those aspects of artistic culture that are common in the experiential rather than the legal sense.

2.1. From Public Property and Publici Juris to Public Domain

The metaphoric notion of a 'public domain' in US copyright law did not exist until the turn of the twentieth century. As Tyler Ochoa and Edward Lee have described, nineteenth-century American courts used the terms 'public property,' 'common property,' and *publici juris*, which translates loosely as 'of public right,' to refer to both noncopyrightable and nonpatentable subject matter.[6] In the late nineteenth century, the term 'public domain' began to appear occasionally in patent decisions (of which more later); within the space of a few decades, it had become standard nomenclature in both copyright and patent cases.

The emergence of the term 'public domain' in US intellectual property law seems to have been prompted by two developments, one judicial and one legislative. The judicial development involved a novel type of legal claim concerning the subject matter of expired patents and copyrights. The basic fact pattern was this: a patented/copyrighted item was sold under a trade name that became well-known to the public. Following expiration of the patent/copyright, the patentee/copyright holder invoked unfair competition laws to prevent would-be competitors from referring to the item by its well-known name. Without exception, the courts rejected these claims, reasoning that any other result would frustrate the public's right to make and sell the items, and would thereby enable the creation of perpetual monopolies. The line of cases concerning the patent/trademark interface included two Supreme Court opinions that remain prominent to this day.[7] The copyright/trademark cases, which are less familiar to modern readers, involved efforts by the publishers of *Webster's Dictionary* to prevent competitors from using that renowned title to market their own editions of the work.[8]

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6. E. Lee, 'The Public's Domain: The Evolution of Legal Restraints on the Government's Power to Control Public Access Through Secrecy or Intellectual Property', 55 *Hastings L.J.* 91-209 (2003), p. 102; T.T. Ochoa, 'Origins and Meanings of the Public Domain', 28 *U. Dayton L. Rev.* 215-266 (2002), pp. 258-259; *see*, e.g., *Baker v. Selden*, 101 U.S. 99, 100-101 (1879) ('common property'); *Evans v. Eaton*, 20 U.S. 356, 425 (1822) ('public property'); *Lawrence v. Dana*, 15 F. Cas. 26, 52 (D. Mass. 1869) ('public property'); *Stowe v. Thomas*, 23 F. Cas. 201 (E.D. Pa. 1853) (*publici juris*); *Thompson v. Haight*, 23 F. Cas. 1040, 1047 (S.D.N.Y. 1826) ('public property' and *publici juris*).
7. *Kellogg Co. v. National Biscuit Co.*, 305 U.S. 111 (1938); *Singer Mfg. Co. v. June Mfg. Co.*, 163 U.S. 169 (1896).
8. *Ogilvie v. G. & C. Merriam Co.*, 149 F. 858 (D. Mass. 1907), *aff'd*, 159 F. 638 (1st Cir. 1908); *G. & C. Merriam Co. v. Straus*, 136 F. 477 (S.D.N.Y. 1904); *Merriam v. Famous Shoe & Clothing Co.*, 47 F. 411 (E.D. Mo. 1891); *Merriam v. Holloway Publ'g Co.*, 43 F. 450, 451 (E.D. Mo. 1890); *see also G. &. C. Merriam Co. v. Syndicate Publ'g Co.*, 237 U.S. 618 (1915) (rejecting belated attempt to claim trademark protection for the name 'Webster'). *But cf. Ogilvie*, 149 F. at 864 (ordering defendants to rewrite their advertising circulars to cure the misleading impression that they were affiliated with the original publisher); *aff'd*, 159 F. 638 (1st Cir. 1908); *see also G. & C. Merriam Co. v. Saalfield*, 198 F. 369 (6th Cir. 1912) (later proceeding addressing *Ogilvie* defendant's noncompliance with remedial order); *Merriam v. Texas Siftings Publ'g Co.*, 49 F. 944

The two earliest decisions in the *Webster's Dictionary* litigation followed existing convention and referred to the subject matter of the expired copyright more abstractly as 'public property.' By chance, one of these decisions was authored by Supreme Court Justice Samuel Miller, who happened to draw the case while sitting as circuit judge for the Eastern District of Missouri. Justice Miller reasoned: 'When a man takes out a copyright, for any of his writings or works, he impliedly agrees that, at the expiration of that copyright, such writings or works shall go to the public and become public property. I may be the first to announce that doctrine, but I announce it without any hesitation… . [A]fter the monopoly has expired, the public shall be entitled ever afterwards to the unrestricted use of the book.'[9] For Justice Miller, the 'public property' formulation indicated that dedication to the public was irrevocable, and could not be avoided by layering additional rights on top of those conveyed in the time-limited grant of copyright. As already noted, Justice Miller was not in fact the first to use 'public property' in this way, but he was by far the most prominent, and under other circumstances his decision and the terminology it employed might have played a foundational role in modern intellectual property law.[10] Justice Miller died less than one month later, however, and was not there to participate when a similar question finally reached the Supreme Court.

In 1896, the Supreme Court decided *Singer Manufacturing Co. v. June Manufacturing Co.*,[11] and shifted the legal terminology in a different direction. The case concerned the eligibility of the name 'Singer' for protection following expiration of the Singer Manufacturing Company's patents on its sewing machines. The Court quoted Justice Miller's discussion of 'public property,' and then went on, via a lengthy discussion of US, British, and French law regarding the subject matter of expired patents, to link that concept to the idea of a 'public domain' in which such property resided. It concluded: 'the word 'Singer,' as we have seen, had become public property, and … it could not be taken by the Singer Company out of the public domain by the mere fact of using that name as one of the constituent elements of a trade-mark.'[12] The term 'public property' appears in the *Singer* opinion seven times; the term 'public domain,' ten times. After *Singer*, courts gradually began to adopt the new terminology, although they continued to use the older terminology as well.

The legislative impetus for widespread adoption of 'public domain' in US intellectual property law was the enactment of the 1909 Copyright Act. Section 7 of the new law expressly excluded copyright protection for 'works in the public domain.'[13]

(S.D.N.Y. 1892) (earlier proceeding involving misleading resale of books published by *Ogilvie* defendant).

9. *Holloway Publ'g Co.*, 43 F. at 451.
10. Two of his earlier opinions continue to play such a role. *See Burrow-Giles Lithographic Co. v. Sarony*, 111 U.S. 53 (1884); *The Trade-Mark Cases*, 100 U.S. 82 (1879).
11. *Singer Mfg. Co. v. June Mfg. Co.,* 163 U.S. 169, 203 (1896).
12. *Singer Mfg. Co.*, 163 U.S. at 203.
13. Copyright Act of 1909, ch. 320, § 7, 35 Stat. 1075, 1077 (1909); *see also* id. § 6 (extending copyright protection to compilations, adaptations 'or other versions of works in the public domain').

The legislative history of the Act contains no explanation for this provision, which evidently was not considered at all controversial.

As courts began to reason in terms of a 'public domain,' the other designations were gradually set aside.[14] As Ochoa describes, another prominent jurist, Learned Hand, who sat on what was fast becoming the most influential copyright court in the country, played an important role in this process.[15] Courts deciding copyright cases adopted the term 'public domain' not only to describe works for which copyright protection had expired or been forfeited, but also to refer to elements of copyrighted works that could not themselves be protected by copyright.[16]

Intellectual property scholars have identified the concept of an intellectual 'public domain' as a European import. Both Jessica Litman and James Boyle note its adoption in the Berne Convention, where it was derived from the French concept of *domaine public*.[17] That is undoubtedly the most plausible explanation for section 7 of the 1909 Act, since the legislative history of the Act contains extensive discussion of European rules on copyright duration and other matters. It does not seem unreasonable to posit that Congress also was aware of the Supreme Court's prominent decision in *Singer*, which was cited as a leading authority in a number of post-1896 copyright cases. Explanations for the *Singer* Court's reference to the public domain turn again to Europe. Both Lee and Ochoa trace the term to French intellectual property treatises and decisions, a number of which the Court quoted at length.[18]

I am inclined to think that these explanations are absolutely right, yet they do not go far enough. At the time of its adoption by the *Singer* Court and the 1909 Congress, the term 'public domain' already existed in US law, where it had a distinct and very different meaning.

2.2. Public Domain, Public Property, and Publici Juris in Nineteenth-Century US Law

The earliest appearance of the term *public domain* in US law is not in patent or copyright law at all but rather in connection with the disposition of publicly owned

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14. For quantitative documentation of the shift, which spanned the first half of the twentieth century, *see* Ochoa, *supra* note 6, at pp. 242-246.
15. *See* Ochoa, *supra* note 6, at pp. 243-244.
16. *See*, e.g., *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 122 (2d Cir. 1930); *Maddux v. Grey*, 43 F.2d 441 (S.D. Cal. 1930); *Alexander v. Theatre Guild,* 26 F.2d 741 (S.D.N.Y. 1927); *Int'l Film Serv. Co. v. Affiliated Distributors*, 283 F. 229 (S.D.N.Y. 1922); *Stodart v. Mutual Film Corp.*, 249 F. 507 (S.D.N.Y. 1917).
17. J. Boyle, 'The Second Enclosure Movement and the Construction of the Public Domain', 66 *L. & Contemp. Probs.* 33-74 (2003), at p. 58; J. Litman, 'The Public Domain', 39 *Emory L.J.* 965-1023 (1990), at p. 975 n. 60.
18. *Singer Mfg. Co.*, 163 U.S. at 186, 196-99, 203 (1896); *see* Lee, *supra* note 6, at pp. 13-14 & n. 66; Ochoa, *supra* note 6, pp. 241-242.

lands.[19] I will therefore call this first model of the public domain in US law the *public lands* model. Although the public lands model had nothing to do with intellectual creations, it established a template for the jurisprudential concept of the public domain that influences debates about the public domain in copyright law to this day.

Public land law in the US traces its origins to a political struggle among the original thirteen states of the new nation. Under pressure from their relatively landless peers, states that claimed title to large tracts of western land gradually ceded title in those lands to the newly-created federal government.[20] The government, in turn, established and administered procedures for surveying 'public domain' lands and transferring them to private buyers, and later oversaw the admission to the union of new states constituted out of the federally administered territories. During the first two-thirds of the nineteenth century, the federal government acquired additional large tracts of land, beginning with the Louisiana Purchase in 1803, and ending with the Alaska Purchase in 1867. It extended the privatization process to new lands as they were acquired.[21]

This process of gradual privatization of public domain lands engendered repeated debates between those who believed that the primary goal should be maximization of revenue and those who believed that the primary goal should be the transfer of lands to productive use.[22] In particular, some in this latter group argued that privatization efforts should give priority to squatters already in possession, and should be structured to prevent large-scale land speculation. At times, the land speculators prevailed; at other times, for a variety of reasons, the politics of privatization yielded policies that were more populist.

The public lands model of the public domain thus rested upon four basic principles. First, public domain lands are geographically separate places that may be surveyed, charted, and divided into manageable parcels. Second, public domain lands are not subject to direct private appropriation. Third, and notably, this does not mean that nobody owns these lands, nor does it mean that they may not become privately owned. It simply means that their transfer to private ownership must proceed according to the rules instituted by their current owner, the sovereign. Fourth, this

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19. Both Litman and Boyle acknowledge this usage of public domain, but do not pursue it. Ochoa also acknowledges the public lands model of the public domain, but argues that the concept of the public domain employed in intellectual property cases was simply different. Ochoa, *supra* note 6, at 258-259. As this section discusses, I think that conclusion is too hasty, and ignores the power of metaphor to shape meaning.
20. *See* D. Feller, *The Public Lands in Jacksonian Politics*, Madison (Wis.), University of Wisconsin Press, 1984, pp. 3-6.
21. For representative histories of US public land law and policy, *see* id.; D. Friedenberg, *Life, Liberty and the Pursuit of Land*, Buffalo, Prometheus Books, 1992; B. Hibbard, *A History of the Public Land Policies,* (1924), Madison (Wis.) reprint 1965; R. Robbins, *Our Landed Heritage* (1942), reprint Lincoln, University of Nebraska Press, 1962.
22. *See* Feller, *supra* note 20; Hibbard, *supra* note 21, at pp. 347-352; P.W. Gates, *The Jeffersonian Dream: Studies in the History of American Land Policy and Development,* Albuquerque, University of New Mexico Press, 1996, pp. 40-45; Robbins, *supra* note 21.

process affords both a testing ground for social and economic policy and a point of entry for more narrowly motivated rent-seeking.

The terms 'public property,' 'common property,' and *publici juris* also did not come from nowhere, but had a wider range of meanings outside of the intellectual property context. The designation 'public property' was applied to publicly owned land, buildings and durable goods, but also to a number of other matters including official records and publicly known information.[23] 'Common property' meant property owned by two or more persons, but also natural resources in which the public (or at least adjoining landowners) acquired vested rights.[24] The range of meanings attached to *publici juris* was even more varied. In some cases, it referred to un-owned or abandoned property, 'open to location by the first comer.'[25] In other cases, it was a synonym for 'common property' in natural resources.[26] Relatedly, *publici juris* sometimes referred to common resources, such as roads or bridges, regulated by the state for the general public benefit. The state might grant franchises to private entities to manage such resources, but these grants remained subject to public supervision in order to preserve public rights of access.[27] In still other cases, it referred more generally to matters of public law, as distinct from private law.[28] In the latter three groups of cases, the label *publici juris* signaled that a case could not be decided simply by weighing the competing claims of private parties.

Lee argues that the shift to the single term 'public domain' marked the emergence of a mature, robust conception of noncopyrightable and copyright-expired material as inalienable public property. When the complex constellation of meanings associated with the earlier terms is juxtaposed with the narrower set of meanings associated with the term 'public domain,' that conclusion seems questionable. The shift in terminology is a significant one, but probably not for the reasons that Lee suggests. In different ways, 'public property,' 'common property,' and *publici juris* all denoted matters affecting the rights of and relations between citizens in society, while 'public domain' served largely as a holding device for land destined for privatization.

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23. *See*, e.g., *State v. Patton*, 64 N.W. 922 (Minn. 1895) (land surveys conducted by country surveyor); *Billingsley v. Clelland*, 41 W. Va. 234 (W. Va. 1895) (generally known information about individuals); *Dunham v. State*, 6 Iowa 245 (Iowa 1858) (judicial decisions).
24. *See*, e.g., *Field v. Barling*, 37 N.E. 850 (Ill. 1894) (light and air above a public road); *State v. Black River Phosphate Co*., 13 So. 640 (Fla. 1893) (navigable waters and their shores).
25. *See*, e.g., *Derry v. Ross*, 5 Colo. 295 (Colo. 1880) (mining claims).
26. *See*, e.g., *Head v. Amoskeag Mfg. Co*., 113 U.S. 9, 23 (1885) (flowing water).
27. *See,* e.g., *Raleigh & Gaston R. Co. v. Davis*, 19 N.C. 451 (N.C. 1837) (public roads); *Proprietors of Charles River Bridge v. Proprietors of Warren Bridge*, 24 Mass. 344 (Mass. 1829) (ferries and bridges).
28. *See*, e.g., *Maguire v. Maguire*, 37 Ky. 181, 183-184 (Ky. App. 1838) ('Marriage … unlike ordinary or commercial contracts, is *publici juris*, because it establishes fundamental and most important domestic relations. And therefore … [it] is regulated and controlled by the sovereign power of the State, and cannot, like *mere contracts*, be dissolved by the mutual consent only of the contracting parties… .').

The *Singer* Court and the Congress of 1909 may not have meant to invoke the established meaning of 'public domain' in US real property law.[29] For most lower court judges and most US-trained lawyers, though, matters probably were not quite so clear. As noted earlier, the term 'public domain' had seen sporadic use in patent cases before *Singer*. It is worth examining the two reported cases more closely. As used in those cases, 'public domain' appears to mean something slightly narrower than 'public property,' 'common property,' or *publici juris*. Nineteenth-century courts used the latter three terms to describe both material for which patent or copyright protection had expired and material definitionally ineligible for protection. Thus, for example, the earliest reported use of *publici juris* in an intellectual property case concerned insufficient novelty; the claimed invention could not be patented, reasoned the court, because it had always belonged to the public.[30] 'Public domain,' in contrast, was applied in the two reported patent cases before *Singer* to describe the status of an invention at the end of the patent's life, an event that could be delayed by surrender of an initial, broad patent and reissue of subsequent, narrower patents.[31] Cross-citation of patent cases in public lands cases and vice versa, moreover, was common. The document transferring title to land formerly part of the public domain was also called a patent, and courts seeking to develop a body of law concerning one subject often turned to the other for guidance.[32]

In this context, it is noteworthy that the concepts of 'public property,' 'common property,' and *publici juris* did not disappear from the intellectual property lexicon

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29. Ochoa argues persuasively that the *Singer* Court did not intend this. Ochoa, *supra* note 6, at pp. 240-242, 257. My concern here, however, is with the intellectual history of the term, not with the proper interpretation of precedent.
30. *Thompson v. Haight*, 23 F. Cas. 1040, 1047 (S.D.N.Y. 1826); *see also Wall v. Leck*, 66 F. 552, 556 (9th Cir. 1895) ('A principle, considered as a natural physical force, is not the product of inventive skill. It is the common property of all mankind.'); *see also Carr v. Rice*, 5 F. Cas. 140, 143 (S.D.N.Y. 1856) (invention 'previously in public use' is 'public property, and the law does not permit it to be appropriated, by means of a patent grant, to individuals').
31. *Brush Elec. Co. v. Elec. Accumulator Co.*, 47 F. 48, 56 (S.D.N.Y. 1891) (reasoning that the expiration of Italian patent rights 'threw the invention into the public domain' only in Italy, but that the corresponding US patent and a subsequent improvement patent remained in force in the US); *Wheeler v. McCormick*, 29 F. Cas. 905, 909 (S.D.N.Y. 1873) ('I am of the opinion that nothing fell into the public domain, on the expiration of [one reissued patent stemming from the surrender of a broader patent], except the special device claimed in it, and that that patent did not include the devices embraced in the other reissues upon which the suit is brought.').
32. *See*, e.g., *Marsh v. Nichols, Shepherd & Co.*, 128 U.S. 605, 610 (1888); *United States v. San Jacinto Tin Co.*, 125 U.S. 273, 281 (1888); United States v. American Bell Tel. Co., 128 U.S. 315, 358-59 (1888) ('[T]here is a striking similarity in the language of that instrument conferring the power upon the government under which patents are issued for inventions, and patents are issued for lands.') (comparing US Const. Art. I, § 8, cl. 8, and id. Art. 4, § 3, cl. 2); *Providence Rubber Co. v. Goodyear*, 76 U.S. 788, 797-98 (1869) ('[A]s regards the point here under consideration, there is no distinction between such a [land] patent and one for an invention or discovery.'); *Pontiac Knit Boot Co. v. Merino Shoe Co.*, 31 F. 286, 289 (D. Me. 1887); *United States v. Colgate*, 21 F. 318, 318 (S.D.N.Y. 1884); *Consolidated Fruit-Jar Co. v. Wright*, 94 U.S. 92, 96-97 (1877) ('A patent for an invention is as much property as a patent for land. The right rests on the same foundation, and is surrounded and protected by the same sanctions.').

immediately. Well into the mid-twentieth century, courts continued to use both terms, with some differences in application. Words, facts, ideas, and preexisting knowledge were public property, common property or *publici juris*, as were materials published without satisfaction of copyright formalities or patent eligibility requirements.[33] Works no longer protected by copyright or patent were in the public domain;[34] the designation was first extended to other categories, such as stock characters or plot elements within copyrighted works, principally via the efforts of Learned Hand and a few of his colleagues, including his cousin Augustus Hand.[35] The initial division of responsibility seems to correspond roughly to that between natural

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33. *See*, e.g., *Alexander-Milburn Co. v. Davis-Bournonville Co*., 46 U.S. 324 (1926) (unclaimed matter disclosed in patent application or any other publication is 'public property'); *Berlin Mills Co. v. Procter & Gamble Co*., 41 U.S. 75 (1920) (technical subject matter lacking novelty is 'public property'); *International News Service v. Associated Press*, 248 U.S. 215, 219 (1918) ('[T]he news element … is not the creation of the writer, but is a report of matters that are ordinarily *publici juris*; it is the history of the day.'); id. at 235 ('[T]he news of current events may be regarded as common property.'); *Holmes v. Hurst*, 174 U.S. 82 (1899) (copyright does not protect words, which are 'common property of the human race,' but only the arrangement of words); *Affiliated Enters. v. Gruber*, 86 F.2d 958 (9th Cir. 1936) (idea disclosed to the public without patent protection becomes 'public property'); *Chautauqua School of Nursing v. National School of Nursing*, 238 F. 151 (2d Cir. 1916) (medical knowledge discussed in nursing textbooks was 'common property'); *Snow v. Laird*, 98 F. 813 (7th Cir. 1900) (photograph published without satisfaction of copyright formalities became 'public property,' and author could not reclaim it by making subsequent changes to the negative); *see also Ferris v. Frohman*, 223 U.S. 424 (1912) (play copyrighted in Britain did not become 'public property' in the US upon its performance in Illinois because performance was not a 'publication'); *Bleistein v. Donaldson Lithographing Co*., 188 U.S. 239 (1903) (images drawn from nature were not for that reason 'common property'); *London v. Biograph Co*. 231 F. 696 (2d Cir. 1916) (characterizing stock plot elements with pedigree extending back to Chaucer as 'common property').

34. *See*, e.g., *Brady v. Reliance Motion Picture Corp*., 232 F. 259 (S.D.N.Y. 1915) (breach of trust by trustee of dramatic rights in motion picture did not release the rights to the public domain); *Union Special Mach. Co. v. Maimin*, 185 F. 120 (C.C.E.D. Pa. 1911) (fact that component parts of combination had 'fallen into the public domain' did not preclude patent protection for combination); *see also Metals Recovery Co. v. Anaconda Copper Mining Co*., 26 F.2d 736 (D. Mont. 1928) ('The object of the statute is … to show how much of the public domain is segregated for the benefit of the patentee.').

35. *See*, e.g., *Nichols v. Universal Pictures Corp*., 45 F.2d 119 (2d Cir. 1930) (L. Hand, J.) (plaintiff's 'copyright did not cover everything that might be drawn from her play; its content went to some extent into the public domain'), *aff'g Nichols v. Universal Picture Corp*., 34 F.2d 145 (S.D.N.Y. 1929) ('fundamental plot' of play is 'common property in the "public domain"'); *Fred Fisher, Inc. v. Dillingham*, 298 F. 145 (S.D.N.Y. 1924) (L. Hand, J.) (copyright for song not precluded by the fact that a similar or identical work 'independently appeared before it and is in the public domain'); *Jeweler's Circular Pub. Co. v. Keystone Pub. Co*., 274 F. 932 (S.D.N.Y. 1921) (L. Hand, J.) (directory could be copyrighted even though its constituent elements were in the public domain); *McCarthy & Fischer v. White*, 259 F. 364 (S.D.N.Y. 1919) (A. Hand, J.) ('Only a publication of the manuscript will amount to an abandonment of the rights of the author and a transfer of them to the public domain.'); *Stodart v. Mutual Film Corp*., 249 F. 507 (S.D.N.Y. 1917) (L. Hand, J.) (plot of an old story was in the public domain, but that did not preclude copyright for variations in new version); *Fitch v. Young*, 230 F. 743 (S.D.N.Y. 1916) (L. Hand, J.) (since then-applicable version of Copyright Act did not confer right to 'novelize' a play, right was in public domain).

law and positive law: words and facts were considered to be fundamentally public in character, while copyrighted works entered the public domain by operation of specific, policy-driven rules.

Gradually, however, the older terminology fell into disuse in intellectual property law. In contemporary opinions that address the boundary between the proprietary and the public, there is only the public domain. The latter term has recently become the focus of tremendous scholarly interest.

2.3. THE PUBLIC DOMAIN IN CONTEMPORARY COPYRIGHT LAW

There are two competing models of the public domain in contemporary copyright law. One, which I will call the *conservancy* model, aligns substantially with the anti-commodificationist position described above. The other, which I will call the *cultural stewardship* model, aligns substantially with the pro-commodificationist position. Both of these models trace their origins to an academic debate about the nature of the public domain that began in the late twentieth century.

The resurgence of interest in the public domain in contemporary copyright scholarship is generally agreed to begin with a provocative article published in 1981 by David Lange.[36] Observing that 'the growth of intellectual property in recent years has been uncontrolled to the point of recklessness,'[37] Lange pressed the case for affirmative acknowledgment of the public domain. Lange was primarily concerned with the emergence of new rights of publicity and unfair competition; in those cases, he argued, the public domain should be the presumptive baseline and new rights should be strictly circumscribed. More generally, however, he characterized the public domain as a matter of public right, rather than simply the negative or obverse of intellectual property, and urged the development of a general theory to explain what the public's rights encompassed.

Lange's article was followed, in 1990, by an influential article authored by Jessica Litman.[38] Litman sought both to identify the constituent elements of the public domain and to synthesize these elements into a coherent theory that would explain the public domain's purpose. According to this theory, the public domain both mediates and enables the concept of originality in copyright law. Without the idea of a public domain to buffer claims of originality, attempts to substantiate these claims would present problems of infinite regress. The public domain is the

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36. D. Lange, 'Recognizing the Public Domain', 44 *L. & Contemp. Probs.* 147 (1981). A number of earlier writers had begun to question the centrality of copyright to the production of artistic culture, including B. Kaplan, 'An Unhurried View of Copyright: Proposals and Prospects', 66 *Colum. L. Rev.* 831 (1966), L. Ray Patterson, *Copyright in Historical Perspective*, Nashville, Vanderbilt University Press, 1968; and S. Breyer, 'The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs', 84 *Harv. L. Rev.* 281-355 (1970); *see also* R.S. Brown, 'Advertising and the Public Interest: Legal Protection of Trade Symbols', 57 *Yale L.J.* 1165-1206 (1948).
37. Id. at p. 147.
38. Litman, *supra* note 17.

negative pregnant that enables authors, and the copyright system more generally, to demarcate what can feasibly be characterized as the product of individual authorship. Litman argued, though, that new works 'inevitably echo[] expressive elements of prior works.'[39]

Until the mid-1990's, this discussion about the nature of the public domain was largely confined to the pages of law journals, and not all scholars were equally convinced of its importance.[40] In particular, the more complex normative claims advanced by Lange and Litman, and the dynamic conception of the public domain that those claims dictated, received relatively little attention from policymakers.[41] In 1995, however, the U.S. Congress began debating proposals for legislation that would extend the duration of both subsisting and future copyrights by an additional twenty years. This legislation, ultimately adopted in 1998 as the Sonny Bono Copyright Term Extension Act,[42] galvanized vigorous opposition. The nature of the public domain, and the ways in which the composition of the public domain changes over time in response to other changes in copyright law, rapidly became matters of pressing importance.

Out of the debates surrounding term extension, and copyright expansion more generally, two distinct visions of the public domain in copyright have emerged, which correspond broadly to the anti-commodification and pro-commodification positions described above. Both models are dynamic; that is, they attempt to describe changes in the content and composition of the public domain over time, and to evaluate the effects of these changes for society more generally. Where the two models part company is in their normative assessment of the public domain and its role within the overall copyright system.

The first of these dynamic models, the conservancy model, is identified with the work of Litman, Yochai Benkler, James Boyle, Pamela Samuelson, Lawrence Lessig, J.H. Reichman and others, and builds directly on Lange's and Litman's earlier work.[43] Broadly speaking, this model is concerned both with ensuring the continued

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39. Id. at p. 1008.
40. *See*, e.g., E. Samuels, 'The Public Domain in Copyright Law', 41 *J. Copyright Soc'y* 137-182 (1993).
41. But *see*: R.W. Kastenmeier and M.J. Remington, 'The Semiconductor Chip Protection Act of 1984: A Swamp or Firm Ground?', 70 *Minn. L. Rev.* 417-470 (1985), pp. 438-442 (advocating a 'political test' for new intellectual property legislation that would include consideration of whether and how the legislation 'will enrich or enhance the aggregate public domain') (citing *Copyright and Technological Change: Hearings before the Subcomm. on Courts, Civil Liberties and the Administration of Justice of the House Comm. on the Judiciary*, 98th Cong., 1st Sess, 65-66 (1983) (statement of David Lange, Professor of Law, Duke University)).
42. Sonny Bono Copyright Term Extension Act, Pub. L. 105-298, 105th Cong., 2d Sess. (1998), codified at 17 U.S.C. §§ 302-304.
43. L. Lessig, *The Future of Ideas: The Fate of the Commons in a Connected World*, New York, Random House/Vintage, 2001; J. Litman, *Digital Copyright*, Amherst, Prometheus Books, 2001; Y. Benkler, 'Through the Looking Glass: Alice and the Constitutional Foundations of the Public Domain', 66 *L. & Contemp. Probs.* 173-224 (2003); Benkler, *supra* note 2; Boyle, *supra* note 17; J.H. Reichman and P.F. Uhlir, 'Promoting Public Good Uses of Scientific Data: A Contractually Reconstructed Commons for Science and Innovation', 66 *L. & Contemp. Probs.*

growth of the public domain and with protecting the existing public domain against incursions. Conservancy theorists view recent expansions of copyright as damaging to patterns of information flow within the copyright system generally.

According to proponents of the conservancy model, recent legislative expansions of copyright are best described as series of unprincipled land grabs, or enclosures, by powerful domestic industries. They argue, moreover, that the CTEA was not the first such land grab, but simply the logical continuation of a process stretching back at least to the comprehensive revision of the copyright laws that began in 1964 and culminated in the Copyright Act of 1976. In particular, they point to a series of changes in the rules governing copyright subsistence and duration that were intended primarily to bring US copyright law into line with copyright law in the rest of the developed world, and that replaced idiosyncratic rules much more hospitable to the public domain. Proponents of the conservancy model also identify as land grabs a series of other efforts to extend copyright protection and/or other intellectual property protection to a variety of nontraditional subject matters, including databases and computer software.

The second dynamic model of the public domain, the cultural stewardship model, acknowledges all of these changes, but paints them in quite a different light. According to this model, continued ownership of copyright enables productive management of artistic and cultural subject matter. Passage into the public domain should occur only after the productive life of a cultural good has ended, and is to be mourned, not celebrated. The metaphor of 'falling' into the public domain, popularized by adherents of the cultural stewardship model (and too often adopted uncritically by adherents of the conservancy model as well) conveys this sense of loss and waste. Not surprisingly, this model claims numerous adherents among representatives of the major copyright industries. Within the academic literature, it is most prominently identified with the work of William Landes and Richard Posner.[44]

Adherents of the cultural stewardship model acknowledge the important role that public domain building blocks play in the ongoing development of artistic culture. In this respect, they too recognize the mediating function of the public domain identified by Litman. They argue, however, that the idea-expression distinction adequately performs the function that Litman described, and will continue to

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315-462 (2003); Samuelson, *supra* note 2; *see also* Lee, *supra*, note 6. I should note that my own previous work aligns me with this group. *See* J.E. Cohen, '*Lochner* in Cyberspace: The New Economic Orthodoxy of 'Rights Management',' 97 *Mich. L. Rev.* 462-562 (1998); J.E. Cohen, 'Copyright and the Jurisprudence of Self-Help', 13 *Berkeley Tech. L.J.* 1089-1143 (1998); J.E. Cohen, 'Copyright and the Perfect Curve', 53 *Vand. L. Rev.* 1799-1819 (2000).

44. W.M. Landes and R.A. Posner, *The Economic Structure of Intellectual Property Law*, Cambridge (Mass.), Harvard University Press, 2003; W.M. Landes and R.A. Posner, 'Indefinitely Renewable Copyright', 70 *U. Chi. L. Rev.* 471-518 (2003); *cf.* R. Polk Wagner, 'Information Wants to Be Free: Intellectual Property and the Mythologies of Control', 103 *Colum. L. Rev.* 995-1034 (2003) (arguing that enhanced control is likely to stimulate the growth of artistic and informational culture).

perform that function even if copyright is lengthened and expanded to cover new forms of creative expression.[45]

The debate about which of the two models is more accurate is vigorous and often heated, and gives little sign of nearing resolution. The impasse results partly from widely divergent theoretical conceptions of the utility of proprietary rights in information and partly from a lack of good empirical evidence to bolster the theoretical claims. It also owes a great deal to the set of implicit conceptual markers originally laid down by the public lands model.

2.4. THE FOUR PUZZLES REVISITED

The foundational principles of the public lands model, described above, translate directly into a set of foundational assumptions that shape the debate about the public domain in contemporary copyright law. In particular, these assumptions create severe difficulties for the conservancy model, which does not endorse them but cannot seem to overcome them.

Recall, again, the four puzzles considered in Part 1. The puzzle of copyright duration turns on a gap between perceptions of both the value and the nature of the public domain. For pro-commodificationists/cultural stewardship theorists, the public domain is neither inherently productive nor inherently public. Anti-commodificationists/conservancy theorists have difficulty understanding this position, but in fact it maps rather well to the public lands model of the public domain, which is designed to facilitate the transfer of public lands to productive use by private parties. Individuals may not lay claim to these lands without the sovereign's consent, but the sovereign may elect to sell them – to the first taker, or the highest bidder, or in any other orderly fashion.

The Supreme Court's opinion in *Eldred v. Ashcroft* illustrates this conceptual mapping. The Court pointed to a regular, if intermittent, congressional practice of granting term extensions to subsisting patents and copyrights, both via generally applicable legislation and by specific grants of relief to particular right-holders.[46] This history, it reasoned, was persuasive evidence that copyright term extension did not violate the Constitution's 'limited times' requirement as long as Congress proffered a rational basis for privatization. In light of this tradition, the Court continued, the initial grant of rights could be said to include the expectation of receiving such extensions; therefore, extension of copyrights in subsisting works also did not violate the constitutional requirement that copyrights be granted only 'to promote [] Progress.'[47] If the public lands model is the touchstone for our conception of the intellectual public domain, these conclusions are both logical and sensible. Indeed,

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45. *See*, e.g., Landes and Posner, *supra* note 44, at pp. 91-102; *see also Eldred v. Ashcroft*, 537 U.S. 186, 217 (2003).
46. *Eldred v. Ashcroft*, 537 U.S. 186, 200-204 (2003).
47. Id. at pp. 214-215.

any other result would prevent Congress from exercising a duty to privatize assets definitionally best suited for productive exploitation.

Consider next the puzzle of copyright's exemptions and limitations, which reveals that for pro-commodificationists, the public and the proprietary are geographically separate realms. Even pro-commodificationists who support fair use don't think successful invocation of the fair use doctrine renders the disputed work in any way 'public.' Just as the physical public domain lies elsewhere – on the Western frontier, or preserved behind the carefully delimited borders of national parks and preserves – so too with the intellectual public domain. Adherents of the conservancy model do not endorse this proposition but have difficulty countering it, because their own model of a productive or creative commons, and the associated trope of enclosure, lends itself to similar geographic conceptualization. This conceptualization, moreover, undermines arguments against commodification more generally; if the public domain in copyright is a discrete place, there are no significant barriers to commodification of everything else.[48]

Next, recall the puzzle of copyrightable subject matter. For anti-commodificationists, many newly-developed informational goods are inherently noncopyrightable. Within the public lands model, newness itself is no bar to privatization; the government did not acquire the Louisiana Purchase or the Mexican Cession to hold them for the general public benefit. More fundamentally, for pro-commodificationists, the public domain is the province of the old and the archetypal. For anti-commodificationists, in contrast, the public domain is more fluid, and can encompass a wide variety of newly developed materials. But if the public domain is a separate, preexisting place, this argument becomes much harder to make.

Finally, consider the puzzle of the DMCA's anti-device provisions. For pro-commodificationists, it makes no sense to say that these provisions remove material from the public domain, because old material already in the public domain is there whether or not one can see it. The part of the public domain that contains the old and the archetypal is like a nature preserve, which one can visit to see rare creatures in their natural habitat. The fact that one cannot visit the nature preserve every day does not mean that it isn't there.

If adherents of the conservancy model have difficulty explaining why commodification threatens the public domain, it is the metaphor itself, and the accompanying legacy of the public lands model, that is partly to blame. But by embracing the term 'public domain' and the related geographically laden concept of the 'commons,' conservancy theorists have not made their task any easier.[49] And if adherents of the cultural stewardship model cannot see exactly how the public domain is relevant

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48. It is precisely for this reason that the Nature Conservancy movement, on which aspects of the conservancy movement in copyright law are modeled, has enjoyed great success but ultimately lacks the power to combat environmental damage on a larger scale.

49. Notable variants with greater geographic promise are Pamela Samuelson's conception of the public domain as comprising a 'core' and a number of 'contiguous territories,' *see* Samuelson, *supra* note 2, and James Boyle's call for a legal realist disaggregation of the concept of publicness, *see* Boyle, *supra* note 17. I will return to these suggestions in Part 4.

to debates about commodification, it is because the definitional entailments of the public lands-based model foreclose some of the conservancy theorists' claims about the importance of public access to the constituent elements of artistic culture.

In short, the cultural stewardship model of the public domain maps well to the legal entailments of the public lands model, and this explains quite a bit about why contemporary debates about the public domain in copyright law turn out as they do. It does not follow, however, that the resulting conception of the public domain is the most appropriate one for copyright law. First, if historical antecedents are to be the test, which I do not argue, it must be acknowledged that the influence of the public lands model is something of a historical accident. If models of the cultural public domain are to be judged solely against standards of historical fidelity, the public lands model is not the only or even the leading candidate. There are the older models of 'public property,' 'common property,' and *publici juris* to consider, which situate the cultural public domain in more abstract, less geographically determined territory using the language of affirmative public right.[50]

The ultimate test of any model of the public domain is not its historical fidelity, however, but whether it fits the phenomenon it is intended to represent. More specifically, because the public domain is a policy construct intended to foster the development of artistic culture, a theory of the public domain must make sense when measured against the ways that creative practice works.[51] Judged against this criterion, the public lands-based understanding of the public domain fares poorly. Geography is not irrelevant to creative practice, nor to theorizing the public domain, but quite a different type of spatial metaphor is needed.

3. THE COMMON IN CULTURE: TOWARD A SOCIAL THEORY OF CREATIVE PRACTICE

One response to the debate about commodification and the public domain in copyright law has been an outpouring of scholarship directed at modeling the activities that the copyright system is intended to encourage. The mainstream of the scholarly literature has focused on economic modeling of markets for creative goods. Although such modeling is useful for a variety of purposes, it does not lead us any closer to understanding the phenomenon of creativity itself. Creativity is a social phenomenon that is both broader than and antecedent to the market exchange of goods and services. Studying it requires a correspondingly broader set of disciplinary resources. These alternative disciplinary approaches suggest an understanding of creative practice,

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50. *See* Lee, *supra* note 6. As Part 4 explains, however, the notion of 'public property' does not adequately describe what I believe to be the optimal extent of the public's entitlement to make certain uses of common cultural resources regardless of who 'owns' those resources.
51. Cf. P. Bourdieu, *Outline of a Theory of Practice,* Cambridge, Cambridge University Press (R. Nice transl. 1977). For a similar approach to a closely related question of copyright policy, *see* M.J. Madison, 'A Pattern-Oriented Approach to Fair Use', 45 *Wm. & Mary L. Rev*. 1525-1690 (2004).

and of the development of artistic culture, that is quite different from that offered by the commodification/cultural stewardship model.

Specifically, here I mean to make three interrelated claims: First, artistic culture is an intrinsic good worth privileging, and saying so need not entail a commitment to privileging some forms of artistic culture over others. Second, artistic culture is most usefully understood not as a set of products (or, as economically-minded analysts might have it, cultural goods), but rather as a relational network of actors, resources, and creative practices. This network develops in ways that are path-dependent, cumulative, recursive, and collaborative. In particular, a critical ingredient in the development of artistic culture is the practical, uncontrolled accessibility of any element within the network to other elements. Third, propounding a theory of artistic culture grounded in creative practice as the predicate for a theory of copyright need not entail reliance on discredited fallacies about either the nature of rights or the nature of authorship.

3.1. CULTURAL MECHANICS

Within the scholarly literature on copyright, the commodificationist perspective is closely allied with the discipline of (law and) economics. The primary tool of this disciplinary approach is the model of market exchange. Because intellectual goods are not inherently excludable, markets for these goods are enabled by the legal, and more recently technical, construction of excludability. According to the basic economic model of copyright, excludability generates incentives to engage in creative activities and to maximize the value and productive life of the resulting outputs. Any resulting distributional inefficiencies can be addressed by narrow exceptions, but the model posits that such exceptions will be few. Instead, driven by the demands of a diverse public and by competition among copyright proprietors, the process of market exchange will produce a diverse and widely accessible variety of intellectual offerings.[52]

Scholars seeking to challenge the commodificationist approach, and the related cultural stewardship model of the public domain have argued that this economic analysis of markets for intellectual goods is too simplistic. Noncommodified and incompletely commodified expression generate value differently than commodified expression, and in ways that are harder to measure. Much of this literature therefore has focused on generating a coherent account of the value that a regime of imperfect commodification produces.

Some theorists have attempted to build a case against commodification by offering competing economic accounts of the likely consequences of strengthening proprietary controls. This literature predicts shifts over time in the content of artistic culture resulting from two related trends. First, Yochai Benkler argues that commodi-

52. *See,* e.g., P. Goldstein, *Copyright's Highway: From Gutenberg to the Celestial Jukebox*, revised ed., Stanford, Stanford Law School, 2003.

fied works containing a high proportion of recycled content will constitute an ever larger proportion of overall creative output because proprietors of large inventories of commodified content will be able to recycle that content at relatively low cost, while other creative actors will experience comparatively high input costs.[53] Second, a number of scholars have observed that increased commodification will affect the cost/benefit calculus for creators of many kinds of works that generate substantial positive externalities for society as a whole. Since these creators typically do not appropriate all or even most of the value of their works, they may be unable to justify the increased cost of inputs from preexisting works; if so, many socially beneficial works will be underproduced.[54]

Other theorists have attempted to build a positive economic case for limits on the commodification of information by studying the productive role of common resources in the organization of economic activity generally. Carol Rose's work on ancient roads emphasizes the dynamic interdependence of private and public property.[55] Elinor Ostrom and Charlotte Hess have challenged the simple dichotomy between private and public goods by identifying several types of common resources and exploring the institutions that have evolved to manage them.[56] This work adds rich layers of complexity and texture to the basic public goods model that conventional law and economics has applied to the study of information markets. Lawrence Lessig expands on both of these themes, elaborating the centrality and institutional robustness of a variety of common creative resources.[57]

A unifying theme of this work is an understanding of common resources not simply as the distant backdrop for productive activity that is largely private, but as the infrastructure that supports private productive activity and enables its success.[58] Another theme is the continual interplay between private and public resources. Connecting the two themes, one might analogize the public domain to a pervasive infrastructure for cultural interchange, a sort of cultural lingua franca without which

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53. Y. Benkler, 'Intellectual Property and the Organization of Information Production', 22 *Int'l Rev. L. & Econ*. 81-99 (2002).
54. *See* Cohen, *supra* note 43, pp. 497-502; M.A. Lemley, 'The Economics of Improvement in Intellectual Property Law', 75 *Tex. L. Rev.* 989-1084 (1997), at pp. 1056-1058; L. Pallas Loren, 'Redefining the Market Failure Approach to Fair Use in an Era of Copyright Permission Systems', 5 *J. Intell. Prop. L.* 1-58 (1997), at pp. 8-32. For a more comprehensive treatment of the topic of positive externalities and its significance for a regime of intellectual property protection, *see* M.A. Lemley, 'Property, Intellectual Property, and Free Riding', 83 *Tex. L. Rev.* 1031-1075 (2005).
55. C.M. Rose, 'The Comedy of the Commons: Custom, Commerce, and Inherently Public Property', 53 *U. Chi. L. Rev.* 711-781 (1986); C.M. Rose, 'Romans, Roads, and Romantic Creators: Traditions of Public Property in the Information Age', 66 *L. & Contemp. Probs*. 89-110 (2003).
56. C. Hess and E. Ostrom, 'Artifacts, Facilities, and Content: Information as a Common-Pool Resource', 66 *L & Contemp. Probs*. 111-145 (2003); E. Ostrom, *Governing the Commons*, New York, Cambridge University Press, 1990.
57. Lessig, *supra* note 43.
58. For a systematic treatment of the economic attributes of infrastructure resources, including information resources, *see* B.M. Frischmann, 'An Economic Theory of Infrastructure and Commons Management', 89 *Minn. L. Rev.* 917-1030 (2005).

proprietary forms of content could neither exist nor be received by their intended audiences.

A final strand of economically-oriented copyright scholarship explores the extent to which nonmarket production can stand on its own as a mechanism for the production of valuable intellectual resources. The initial catalyst for this effort was the open source software movement, which has enjoyed great technical and commercial success, but the scholarly frame of reference has expanded to encompass distributed 'peer production' of other cultural goods. Benkler in particular has championed nonmarket production as a viable and often superior method of producing goods that exhibit certain characteristics.[59]

Even these more sophisticated economic efforts demonstrate, however, that economics is not a discipline well suited to the task of modeling creativity itself. The economic approach to modeling, and by hypothesis predicting, the growth of artistic culture is resolutely Newtonian: It seeks to derive precepts of copyright policy from the actions and reactions of interested parties with respect to existing creative goods or projects, and from the coefficients of friction introduced by different legal and market institutions. Even with more careful attention to the dynamic effects of proprietary rights, and to the interplay between the proprietary and the public, what remains most important is what the models leave out.

Economic models of creativity treat creative motivation as both exogenous and abstract. This limitation is inherent in the nature of economic reasoning generally. Economics infers motivation from conduct; it is not interested in, and lacks tools to explore, the problem of what creates motivation, and more precisely inspiration, in the first place. As a result, economic tools are good for explaining shifts in larger patterns of supply and demand, and for analyzing the institutional structures that evolve to enable exploitation of particular types of creative resources, but bad for identifying the conditions that will stimulate creative work in the first place. The problem is especially acute in cases of large creative leaps, which by their very nature cannot be predicted from existing patterns. Economics is fundamentally the study of production rather than creation. Admittedly the force of this distinction is blunted slightly in the age of mass-produced cultural works created for mass audiences.[60] Nonetheless it is still a difference that matters; the initial inspiration must come from somewhere. Economic models of markets for intellectual goods blithely consign inspiration to the category of 'fixed costs' (or, worse, assumed inputs); a categorization that seems to miss at least part of the point of a copyright system.

By the same token, economics lacks appropriate tools to study audience response to creative works. Economics can model demand, but demand is a poor metric for

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59. *See* Y. Benkler, 'Coase's Penguin, or, Linux and The Nature of the Firm', 112 *Yale L.J.* 369-446 (2002); Y. Benkler, 'Sharing Nicely: On Shareable Goods and the Emergence of Sharing as a Modality of Economic Production', 114 *Yale L.J.* 273-358 (2004).

60. Cf. W. Benjamin, 'The Work of Art in the Age of Mechanical Reproduction', in W. Benjamin, *Illuminations*, Hannah Arendt, ed., New York, Harcourt, Brace and World, 1968 (arguing that mass production of cultural objects will fundamentally alter hierarchical conceptions of artistic value).

gauging the extent to which a work captures the public imagination. Two books may sell equally well, but one may shift public perceptions of the nature of art, or of life, while the other does not. Because it measures sales rather than the communication of ideas, economics lacks the tools to distinguish between the world-changing and the merely popular, on the one hand, and between the avant garde and the simply unappealing, on the other.

Although economic modeling can contribute to the understanding of markets for creative goods, and of the larger legal and social institutions that shape those markets, by itself it cannot provide adequate theoretical foundation for understanding the dynamics that drive the development of artistic culture, and therefore it cannot provide adequate theoretical foundation for copyright policy. Economic talk about creativity is trapped in Plato's cave; it purports to have divined creativity's ideal social form, but captures only its shadow. Creativity and creative practice are social phenomena that are both broader than and antecedent to the institutions with which both economics and more broadly political economy are concerned.

3.2. CULTURAL BIOLOGY

A second set of theories uses metaphors and models drawn from the life sciences to explain creative processes. A great strength of these models relative to the mainstream economic approach is their insistence on incorporating considerations of complexity and interdependence from the ground up. Their great weakness is their tendency to focus on information as the primary unit of analysis.

James Boyle offers a theory of information ecology modeled after both the theory and the politics of the environmental movement.[61] Specialists in ecology seek to understand and celebrate complexity and interdependence in biological systems. They recognize that small changes may produce effects that reverberate through species, food chains, and habitats, ultimately disrupting larger patterns of sustainability. Similarly, Boyle posits that alterations in the legal rules governing information exchange may work large disruptions in the ecology of our creative culture.

In the realm of technical standards, Susan Crawford has outlined a theory of information development that is based on evolutionary theory.[62] Here again, diversity and complexity are central themes. Crawford notes that a key measure of evolutionary fitness is the extent of intraspecies diversity. She posits that diversity is equally vital to ensuring the robustness and general adaptive fitness of technical standards. Using the copyright laws, or paracopyright regulation focused on technical

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61. Boyle, *supra* note 17; J. Boyle, 'A Politics of Intellectual Property: Environmentalism for the Net?', 47 *Duke L.J.* 87-116 (1997); *see also* F.A. Pasquale, *The Market Effects of an Intellectual Commons: Lessons from Environmental Economics for the Law of Copyright*, SSRN #584682 (working paper 2004).
62. S.P. Crawford, 'The Biology of the Broadcast Flag', 25 *Hastings Comm./Ent. L.J.* 603-652 (2003).

protection measures, to pick winners in standards processes undermines diversity. Crawford therefore concludes that regulatory coordination of standards processes is ultimately unwise. One might draw similar conclusions about standardization in nontechnical realms of creative endeavor. If so, the greater cultural standardization likely to occur under conditions of pervasive commodification is cause for substantial concern.[63]

Jack Balkin applies a different strand of evolutionary theory to the task of understanding patterns of nontechnical information flow in society. His theory of 'cultural software' borrows Richard Dawkins' concept of 'memes' – subcellular units of genetic material that seek to maximize their own survival – to model social processes of information exchange.[64] Balkin argues that ideology similarly seeks its own propagation, and that those bits of ideology which prove both particularly compelling and particularly adaptable spread the most successfully. One might extend the same model to artistic styles and scholarly conventions. Like ideology, artistic expression depends for its continued vitality on both communication and change. Seen through the lens of Balkin's theory, increased commodification in copyright law is bad policy not because it undermines diversity, but because it enables private control of creative content.[65]

At the same time, however, models drawn from the life sciences betray a worrisome tendency toward animism. To the extent that these models purport to establish natural laws of information, we should be quite skeptical. Information is generated by human agency and through human perception; whatever properties it has are derivative of properties of human behavior and cognition. Life science-based models also metaphorically conflate creative diversity with literal, physical survival. That is good politics, but it is less satisfactory as theory. The human race may yet kill itself off, but copyright law is unlikely to be the cause.

Questions about the diversity of the information environment are political and philosophical in nature. That intellectual property scholars as a group are increasingly reluctant to discuss them as such reflects the relative disrepute into which humanistic inquiry has sunk in intellectual property scholarship.[66] The search for competing models of cultural development is in part a search for competing metaphors; in this regard, biological models that emphasize complexity, interdependence, and the functionality of communication are enormously valuable. Yet the evolution of creative subject matter cannot be understood separately from the behavior of creative people.

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63. This conclusion aligns with the economic argument developed by Benkler, *supra* note 53.
64. J.M. Balkin, *Cultural Software: A Theory of Ideology,* New Haven, Yale University Press, 1998; *see also* T.F. Cotter, 'Prolegomenon to a Memetic Theory of Copyright', 55 *Fla. L. Rev.* 779-793 (2003); *see generally* R. Dawkins, *The Selfish Gene*, Oxford, Oxford University Press, 1999.
65. J. Balkin, 'Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society', 79 *N.Y.U. L. Rev.* 1-58 (2004).
66. I should make clear that I do not count either Balkin or Boyle personally as reluctant humanists. Boyle in particular is quite clear that the environmental metaphor is a metaphor, selected in part for its rhetorical and political value. I mean only to suggest that the metaphor frames the discussion in other ways as well.

3.3. CULTURAL ANTHROPOLOGY

A third strand of the emerging literature focuses on historical and anthropological investigations of artistic communities and practices. These investigations reveal that copying, reworking, and derivation are not peripheral or inauthentic activities, but lie at the core of creative practice however it is defined.

Because popular music has become a primary battleground of the copyright wars, it is instructive to start there. Two persistent themes in the study of music force an appreciation of the centrality of derivative uses. First, forms of music long understood as created 'from the ground up' by a ceaseless process of innovative borrowing – blues, jazz, folk, and so on – increasingly are also acknowledged as important and 'serious' cultural forms. Second, musicologists who study the 'classical' form now enshrined as elite culture have painstakingly documented the fact that classical composers have been no less dependent on borrowings and reworkings than their down-market counterparts.[67] The great composers of the Western canon borrowed from each other and also from a range of less elevated source materials. Although we think of 'sampling' as an essentially modern practice, they filled their symphonies and overtures with sound samples ranging from hunt horns to carnival music, all sound heard in the background of their own lives. Sometimes, the borrowing and reworking were far more central. The third movement of Mahler's powerful first symphony is based on the French children's song 'Frere Jacques'; there are countless other examples.

Copying and reworking have been equally central to the evolution of the visual arts. At least since the Renaissance, copying has been considered an essential part of artistic development for both novices and mature artists.[68] For mature artists, reworking others' material is part of an ongoing artistic dialogue, and also furnishes material for a broader conversation among fellow artists, critics, and members of the public. Thus, for example, the 2003 'Manet/Velasquez' exhibit at New York's Museum of Modern Art celebrated Velasquez as a source of artistic inspiration for the impressionist movement, and featured several Velasquez works side-by-side with Manet's reinterpretations of those works. The 2004 'Calder Miro' exhibit at the Phillips Collection in Washington, DC, traced the parallel evolution of various compositional elements in the work of the two artists, who were also close friends. Contemporary sculptor J. Seward Johnson, Jr., has continued this tradition of creative reinterpretation by building three-dimensional reproductions of paintings by impressionist masters. When this work was exhibited at the Corcoran Gallery of

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67. *See* O.B. Arewa, 'From J.C. Bach to Hip Hop: Musical Borrowing, Copyright and Cultural Context', 84 *N.C.L. Rev.* 547-645 (2006); J.P. Burkholder, A. Giger and D.C. Birchler, eds., *Musical Borrowing: An Annotated Bibliography*, <www.music.indiana.edu/borrowing/>; Negativland, 'Two Relations to a Cultural Public Domain', 66 *L. & Contemp. Probs.* 239-262 (2003).
68. *See* C.J. Homburg, *The Copy Turns Original*, Amsterdam, Benjamins, 1996. As Homburg explains, understandings of the purpose of copying and the degree of fidelity required changed over time as a result of both changing views of the nature of art and political struggles for control of validating institutions, but the copy remained constant.

Art in Washington, DC, press materials prepared by the curators noted its uncanny ability to take viewers inside the works, thereby changing the relationship between observer and observed.

Audio-visual works of mass culture similarly generate both box office momentum and critical acclaim by reworking existing materials. Some films are obvious products of creative pastiche; films in this tradition range from *Shrek* to *Scary Movie* to the *Austin Powers*, *Airplane*, and *Naked Gun* series. A focus on parody and pastiche, though, would greatly understate the extent to which film relies on a more diverse repertoire of creative borrowings. The extra features included on commercially available DVDs often draw attention to and celebrate these borrowings. To take one recent example, the DVD of *Kill Bill* (volume 1) includes a short documentary in which director Quentin Tarantino explains the film's debt to a range of preexisting works ranging from modern Japanese anime to old Japanese spaghetti Westerns.

One could argue that, in light of the enormous investment poured into mass commercial culture, reworkings of these cultural products nonetheless should be subject to slightly different rules. But it is the essence of reworking to cross lines and blur boundaries. One can think of no more omnipresent visual icons of the Pop art movement than Andy Warhol's monumental Campbell's soup cans or his silkscreened portraits of celebrities such as Jacqueline Kennedy Onassis and Marilyn Monroe. Among the works of twentieth century painter Larry Rivers are a series of portraits of great artists and performers in the settings that inspired them. In one, impressionist painter Henri Matisse stares out from within a papier maché reproduction of his celebrated 'Red Room'; in another, Charlie Chaplin climbs the assembly line in the film *Modern Times*. It is hard to see why different conventions should govern the two works, which equally portray icons of cultural modernism. And as films from *Amadeus* to *Pollock* to *Basquiat* to *Shine* to *Shakespeare in Love* demonstrate, Hollywood in its turn has found endless creative fodder in the lives of artists great and small.

Works of literature and drama are often viewed as the most individualistic and least derivative, but here too borrowing and reworking are both conventional and critically prized. Here are some examples drawn from a wave of prominent and critically acclaimed literary and dramatic retellings that spans the twentieth century: George Bernard Shaw's *Pygmalion* (followed by Lerner and Loewe's *My Fair Lady*); James Joyce's *Ulysses*; John Barth's *Grendel*; Thornton Wilder's *The Skin of Our Teeth*; Tom Stoppard's *Rosencrantz & Guildenstern Are Dead*; David Henry Hwang's *M. Butterfly*; Pia Pera and Ann Goldstein's *Lo's Diary*; Sena Jeter Naslund's *Ahab's Wife*; Gregory Maguire's *Wicked*. Reworking is common practice in the realm of performance as well; within the 2003/04 season alone, Washington's critically acclaimed Shakespeare Theatre restaged Sophocles' Oedipus cycle in Africa, Shakespeare's *Richard III* in a mental hospital, and recast the tragically doomed son in Ibsen's *Ghosts* as a victim of AIDS rather than tuberculosis.

Once again, though, a narrow focus on the twentieth century and the literary products of cultural modernism obscures the extent to which reworking has been a common literary device throughout the history of the written word. A leading practitioner of this method was Shakespeare, who borrowed plot materials from

numerous preexisting (and often copyrighted) works.[69] In addition, Shakespeare often used the device of a play-within-a-play to introduce the stories of classical mythology, as when the hapless tradesmen of *A Midsummer Night's Dream* perform the tragedy of Pyramus and Thisbe for the royal court. This performance, and others like it, are the original fan fiction, a practice of participatory and critical engagement with cultural works that stretches back hundreds of years.

The forms of creative borrowing have changed in some respects. First, because creative expression draws upon raw materials from everyday life, the subject matter of creative works has changed as well. Yet some of what looks like change is instead continuity. Then, as now, artists drew inspiration from myth, legend, and celebrity. Today, pop culture rather than Greek mythology or Catholic hagiography provides a primary source of new material. The substitution of earthly deities for heavenly ones does not render creative borrowing fundamentally different.

Second, as the historical record has expanded to encompass photographic documentation, the scope of historically inspired borrowings expands correspondingly. The most-cited example of this point is probably the big-budget film *Forrest Gump*, which applied the techniques of collage to 'document' its eponymous hero's involvement in various important twentieth-century events. Yet once again the point goes far beyond Hollywood and far beyond collage. I have a friend who paints stunning, fauvist portraits of great jazz musicians, most of whom are no longer living. Because she can no longer see her subjects in person, she works from old photographs. To call this infringement, or derivative in the pejorative sense, would be to misconstrue completely the deeply creative nature of her enterprise. Like the written and spoken word, the visual gives us access to our past, and so to ourselves.

One might argue that the contemporary artistic ethos recognizes fewer limits on freedom to tamper with story line or imagery than in previous eras, and that copyright is necessary to keep experimentation within bounds. Yet that explanation rings false for reasons both old and new. The history of art is one of challenges to cultural orthodoxy; many claimants to canon status today were seen as rebels or outsiders first. Art, and creative practice more broadly, are transgressive, mongrelizing, and frequently democratizing forces. Phenomena as diverse as high-concept appropriation art and fan fiction are simply the logical outgrowth of these tendencies in an era of networked communication. And the mass culture industries are equally eager to dissolve the boundaries of their own creative works. Movies on DVD offer deleted scenes, alternate endings, 'director's cut' versions, and behind-the-scenes commentary on the production process, and 'unplugged' recordings of popular music give familiar compositions and performing styles an entirely new feel. These offerings acknowledge that reworking of sounds, images and texts lies at the heart of the creative process as it is understood by practitioners ranging from the iconoclastic to the mainstream.

All of this would be beside the point if there were any plausible basis for thinking that, when we as a society make claims about the intrinsic worth of art, these examples

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69. *See* <www.shakespeare-online.com/sources/>.

are not the sort of thing that we mean. But of course we do mean these examples, and thousands of others. And we routinely invoke them as justification both for having copyright laws and for deciding particular cases in particular ways.

3.4. NOTES TOWARD A SOCIOLOGY OF CREATIVE PRACTICE

So far, these rich descriptive accounts of creative practice lack a correspondingly rich theoretical component. Furnishing one requires not an economics or a biology or a politics of creativity, but more broadly a sociology. As the biologically-derived theories of creativity suggest, principles important to modeling creativity in a more rigorous way will include the interdependence of information, the robustness of complexity, and the centrality of both communication and change. But a theory of creativity must be rooted, as well, in disciplinary approaches that concern themselves primarily with human agency and social structures. At the same time, such a theory must remain rooted in the day-to-day realities of creative practice – in what people actually do in the spaces where they live.

In recent debates about commodification and the public domain, the account of artistic borrowings as widespread and inevitable has become associated on a theoretical level with the work of Rosemary Coombe,[70] and on an applied or practical level with the work of appropriation artists such as Negativland and Sherrie Levine. Yet a general theory of artistic creativity will not privilege only acts of distancing or cultural opposition, for the simple reason that the history of creative practice is far more complex, and encompasses a much wider range of borrowings. Although one can cite examples of self-described appropriation art to illustrate the principles of complexity, interdependence, and communication, there is no need to do so. A theory of artistic creativity must describe a more general relationship between individuals and their cultural surroundings. Postmodernist theory, in turn, describes a special case of this relationship under certain legal and political conditions, namely those in which audience members are forced into a duality of consumer/opposer with respect to cultural products. Postmodernist theory is not the alternative to commodification, but its complement; it supplies a comprehensive theory of the way that people will interact with their cultural environment under conditions of commodification.[71] A general theory of creativity must do more.

One might argue that the list in Section III.C seems to privilege a particular, overnarrow and determinedly Western conception of 'art,' and to hint at an equally suspect conception of artistic merit. This objection is enormously important but not, I think, fatal. The list in Section III.C reflects the Western canon, both classical and contemporary, because that is what I know, but it is intended to illustrate a point

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70. R.J. Coombe, *The Cultural Life of Intellectual Properties: Authorship, Appropriation, and Law*, Durham (N.C.), Duke University Press, 1998.
71. Cf. F. Jameson, *Post-Modernism and the Cultural Logic of Late Capitalism,* Durham (N.C.), Duke University Press, 1991; Frank Webster, *Theories of the Information Society,* London, New York, Routledge, 1995.

about practice, not a point about taxonomy. The available evidence suggests that a more inclusive taxonomy would only underscore the centrality of borrowing, collaboration, and environment to creative practice of all sorts.[72] As to merit, I plead guilty of believing that in hindsight, it is possible to say that some art is better and that a small fraction of that art is superlative, but it seems to me that that is not saying much. Debates about what is art, and what is good art, are integrally bound up with the generation of particular cultural narratives. At the same time, universally across human cultures, artistic culture (however defined) preserves space and time for reflection and conscious (re)definition of identity, both individual and collective. Such efforts will be filtered through the prism of preexisting identity, but that is better than the alternative.

Another way of putting the point, perhaps, is that in contemporary (Western) copyright theory, the distinctive modes of navel-gazing practiced by anthropologists, sociologists, and critical theorists can combine to produce a perfect storm of self-doubt. It is both possible and essential to make and defend explicit normative claims about the importance of artistic culture – while at the same time acknowledging and bracketing very valid questions about the meaning of 'culture,' the culturally-contingent nature of art and creative practice, and the political valence of judgments about artistic merit. Those are matters to be visited and revisited during the ongoing process of framing and applying rules about the nature and scope of proprietary rights in artistic culture; they are not reasons to abandon the field entirely.

I do not pretend to have synthesized a general theory of artistic creativity. Instead, I offer a series of propositions that I believe any such general theory must include.

1. Creative practice is both determined and underdetermined by cultural environment. People create culture, but are also created by it. For practitioners of the disciplines that study human social institutions, this preliminary point is so true as to be trite. Although they do very different things with it, the constitutive aspect of culture is a starting point for sociologists, anthropologists, communication theorists, and many others.[73] The point is nonetheless an appropriate place to begin, simply because

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72. *See*, e.g., Arewa, *supra* note 67 (discussing hip hop culture and its origins); O.B. Arewa, *Cultural Autonomy and Cultural Hierarchies: Sacred Spaces, Intellectual Property and Local Knowledge* (working paper 2004, SSRN #596921) (describing process of cultural 'creolization'); W.P. Alford, *To Steal a Book Is an Elegant Offense*, Stanford, Stanford University Press, 1995 (discussing attitudes toward copying in traditional Chinese culture); M. Randall, *Pragmatic Plagiarism: Authorship, Profit, and Power*, Toronto, University of Toronto Press, 2001 (exploring the evolving social construction of the boundary between 'plagiarism' and 'authorship').

73. *See*, e.g., P. Bourdieu, *The Field of Cultural Production*, Columbia University Press/Cambridge, Polity Press, 1993; M. Foucault, *The Order of Things: An Archaeology of the Human Sciences*, New York, Pantheon Books, 1970; G. Bowker and S. Leigh Star, *Sorting Things Out: Classification and Its Consequences*, New York, MIT Press, 1999; F. Webster, *Theories of the Information Society*, London, Routledge, 1995. Regarding the content of the term 'culture,' I refer the reader to note 4 above. In this section, I use 'culture' both in the narrow sense described there and more broadly to include the full gamut of symbols and practices within a society. On the mutually

copyright jurisprudence and mainstream economic copyright scholarship have yet to recognize it.

Copyright's implicit model of creativity, and more broadly of artistic culture, remains firmly ensconced in the nineteenth century. This model assumes human dominion over artistic culture, which is to say that it does not perceive a constitutive role for artistic culture at all.[74] To the contrary, it is the presumptive passivity and nonfunctionality of artistic culture that undergird the traditional separation between the copyright and patent systems. The technological processes with which the patent system is concerned are chains of physical, chemical, or electrical cause and effect that produce largely predictable results. Artistic culture, in contrast, is not perceived to work this way. That is, we generally do not observe similar chains of causes and effects within ourselves as a result of exposure to artistic or informational works.

The experiential model of culture production as divorced from functionality suffers from what a contemporary social scientist might describe as a self-study bias. We experience individuality as the possession of an autonomous, exogenous self, and therefore infer that although we consume cultural goods, we shape them and not the reverse. Yet it is difficult to define an individual self that exists wholly apart from and exogenous to the cultural environment. A child born in a mountain village in Western Pakistan will probably come to believe very different things than a child born on the same day in Los Angeles or Tokyo. The predominant forms of artistic culture within different societies will vary accordingly, and will evolve differently, even when they appear to exhibit cross-cultural similarities or when cross-pollination produces areas of seeming convergence.[75] Culture is a matrix for structuring both the forms of human entertainment and the weightier matters of what we know and how we claim to know it. Creative practice is determined in large part by the content of the immediate artistic environment, and more generally by the entirety of an individual's cultural conditioning.

At the same time, the results of creative practice are not predetermined. Culture does not function in the same way that chemistry or physics or electricity functions. If you mix gaseous hydrogen with gaseous oxygen, you will get an explosion and a few drops of water, in exactly predictable amounts, every time. If you mix Homeric epics with the history and folk traditions of the American South, you may get *Oh Brother, Where Art Thou?*, or *Cold Mountain*, or any number of other possibilities.

The determinism that characterizes creative practice, and cultural processes more broadly, is not a matter of rigid cause and effect, but more loosely of path

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constitutive relationship between the two, *see* A. Bowler, 'Methodological Dilemmas in the Sociology of Art', in D. Crane (ed.), *The Sociology of Culture: Emerging Theoretical Perspectives*, Oxford, Blackwell, 1995, p. 247; Richard A. Peterson, *Culture Studies Through the Production Perspective: Progress and Prospects*, *in* Crane, *supra*, at p. 163.

74. As discussed in Part 4.2 below, this perception appears most clearly in judicially-developed rules that increasingly restrict invocation of both the idea-expression distinction and the fair use doctrine to cases of proved need to use another's expression.

75. For an example of cross-cultural similarities and differences, *see* <en.wikipedia.org/wiki/Cinderella> (describing variants of the Cinderella story that appear in different cultures) and <edsitement.neh.gov/view_lesson_plan.asp?id=419> (same).

dependence. Cultural processes are positive feedback loops. Cultural conditioning influences the ways that people respond to their cultural environment, and to the artifacts and experiences available in culture markets, and these responses influence the further development of cultural goods and experiences, including works of creative expression. For all that, culture changes, and often in ways that could not be predicted, however clear the lines of causality may seem in hindsight. It over-generalizes only slightly to say that economic models of information interdependence overstate the extent of individual agency in this process, while biological models understate it. The truth is more nearly somewhere in between, and we need a different way of getting at it.

From all of this it follows that creative practice can be predicted, but only in the most general terms; it is what humans do. The specific outlets that creative practice takes and the results it yields cannot be predicted. Even within the natural sciences, understanding of complex systems is still in its infancy. The problems that must be solved to understand complex social systems are more difficult by many orders of magnitude. Creative practice can be studied, with an aim of generating descriptive models and understanding the variables that seem to matter, but that is all. Economic models that focus on licensing as the engine of creative development mistake the clarity of hindsight for perfect predictability. Rather than attempting to predict specific creative outputs, or shackling creative practice to economic models that impose unattainable standards of prescience on 'owners' of creative content, copyright policy should focus on creating the conditions likely to prove most fertile for creative practice generally.

2. Artistic culture develops by a process of iteration within established conventions, punctuated by larger 'representational shifts.' The unpredictability of specific creative outputs does not preclude a more general understanding of the processes by which artistic culture develops. Work within sociology proper historically shied away from exploring the content of artistic culture and focused instead on the social structures that surround and facilitate culture production, while work within art history and criticism pursued the opposite strategy.[76] Scholars working in the emerging interdisciplinary area of cultural studies have recognized that to shed light on the production of culture, including artistic culture, it is necessary to engage content and social structure together.[77] My aim in the next two sections is a (relatively) modest one: I suggest that the study of creative practice can draw valuable lessons from the relatively more developed literature on the sociology of science and technology, which seeks to do exactly that.

The 'Art History 101' view of cultural development as a series of great leaps forward obscures the fact that the vast majority of artistic endeavors do not consist of such leaps. Niva Elkin-Koren and Eli Salzberger remind us that what is true

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76. *See*: Bowler, *supra* note 73; *see also* D. Crane, *The Production of Culture: Media and the Urban Arts*, Newbury Park, Sage, 1992, pp. 77-106.
77. *See*: Bowler, *supra* note 73; Crane, *supra* note 76; H.S. Becker, *Art Worlds*, Berkeley, University of California Press, 1982; Peterson, *supra* note 73.

for science is true for other manifestations of human creative energy. Most artists practice 'normal science' in the Kuhnian sense.[78] They work with established methods and techniques and within established conventions, and produce works of creative expression for themselves, their families, and their communities. Reworking, borrowing, and imitation are essential to this process.

Like science, creative practice also experiences larger shifts. Whether these shifts are properly considered 'paradigm shifts' in the Kuhnian sense is less clear. As defined by Kuhn, a 'paradigm' refers to a theoretical framework for understanding a field of inquiry; a paradigm shift occurs when one framework completely supplants the framework that preceded it.[79] In this respect, creative practice and scientific practice exhibit some similarities, but also some important differences. First, scientific practice is constrained by pragmatic considerations such as the reproducibility of laboratory results. This is true even for paradigm-shifting science; new theories still must fit the facts. Creative practice is constrained by both technical limits and past practice to a much lesser degree; creative experiments don't need to 'work' in any generally accepted sense (although they must appeal to someone's aesthetic sensibility in order to survive). Second and relatedly, creative practice in any given field simultaneously can encompass multiple and contradictory frameworks.

It probably is more accurate, then, to say that creative practice does not experience paradigm shifts per se, but rather experiences what we might call representational shifts – large shifts in ways of representing images, sounds, and ideas that alter the way the creative enterprise in a given field is understood even by those who do not adopt the new framework in their own creative practice. Thus, for example, the development of the twelve-tone approach to musical composition in twentieth-century Western symphonic music and the development of cubism in twentieth-century Western painting count as representational shifts, in that each dramatically affected perceptions of the compositional possibilities in their respective fields even though they were always minority practices.[80]

3. Within both modes of artistic development, creative practice is relational and network-driven. Copyright jurisprudence is centrally concerned with resolving disputes over the end products of creative practice. As a framework for setting policy, however, exclusive focus on outputs is a mistake. Artistic culture is most usefully understood as a relational network of actors, resources, and practices.[81]

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78. N. Elkin-Koren and E.M. Salzberger, *Law, Economics and Cyberspace: The Effects of Cyberspace on the Economic Analysis of Law,* Cheltenham, Edward Elgar, 2004, §1.4; *see* T.S. Kuhn, *The Structure of Scientific Revolutions,* 1st ed., Chicago, Chicago University Press, 1962.
79. *See* Kuhn, *supra* note 78.
80. For discussion of the ways in which representational shifts reverberate within 'art worlds' in music, *see* Becker, *supra* note 77, at 301-310.
81. Thanks to Brett Frischmann for drawing my attention to the distinction between outputs and processes. The analysis in this section also owes a debt to Michael Madison's discussion of 'emergentist' approaches to creativity. *See* M.J. Madison, 'A Pattern-Oriented Approach to Fair Use', 45 *Wm. & Mary L. Rev.* 1525-1690 (2004), pp. 1682-1686.

Research in the psychology of creativity has focused primarily on identifying attributes of creativity in individuals, and has identified a complex of cognitive and personality factors that predispose certain individuals to creative work.[82] This research also has revealed, however, that individual creativity is socially structured to a significant degree. Creative practice thrives in an environment that facilitates open exchange and experimentation; it fails to thrive or does not thrive as hardily in an environment that does not do these things.[83] Although there is much that is individual about creativity, creativity therefore cannot be understood simply as an individual phenomenon.

Whether there is a distinct subcategory of creativity properly labeled genius, and whether it is continuous or discontinuous with ordinary creativity, are hotly debated questions, but they appear to be irrelevant to the question whether environment is an important determinant of creativity. Both Howard Gardner's work on the characteristics of highly creative individuals and Dean Simonton's attempt to develop a more general theory of genius-level creativity emphasize the important roles of environment at various stages of the creative process.[84]

A corollary to these points, which returns us again to the sociology of science, is that the Mertonian model of open exchange within scientific communities translates surprisingly well to creative communities.[85] Creative practitioners of all types continually share and discuss their work with one another, and regard the norm of sharing as integral to the creative process. Periods of great artistic ferment may be characterized by especially intense collaboration and exchange among members of relatively close-knit communities.[86]

Communities and organizations within 'art worlds' also police innovation in different ways. Socially, the production of culture is mediated by a variety of organizations ranging from managers to galleries, concert halls and publishers to official and alternative tastemakers to public funders. To succeed, both paradigm shifts in science and representational shifts in art must secure access to existing formal and informal structures of validation within the field, or must generate

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82. *See* T.M. Amabile, *Creativity in Context*, Boulder, Westview Press, 1996; M. Csikszentmihalyi, *Creativity: Flow and the Psychology of Discovery and Invention*, New York, Harper Collins, 1996; H. Gardner, *Creating Minds: An Anatomy of Creativity Seen Through the Lives of Freud, Einstein, Picasso, Stravinsky, Eliot, Graham, and Gandhi*, New York, Basic Books, 1993; D.K. Simonton, *Origins of Genius*, New York, Oxford University Press, 1999.
83. *See* Amabile, *supra* note 82, at pp. 115-120, 124-127, 231-232; Csikszentmihalyi, *supra* note 82.
84. *See* Gardner, *supra* note 82; Simonton, *supra* note 82, at pp. 206-215.
85. *See* R.K. Merton, *On Social Structure and Science,* Chicago, University of Chicago Press, 1996, pp. 269-276.
86. The importance of community to the creative process is clear even from historical narratives that focus primarily on individuals, such as Daniel Boorstin's account of great Western artists and intellectuals. D.J. Boorstin, *The Creators: A History of Heroes of the Imagination,* New York, Vintage Books, 1993; *see*, e.g., id. at pp. 384-394 (discussing Brunelleschi's position in Florentine society and his connections to some other contemporary artists), 515-521 (describing relationships between Monet and other leading impressionist painters).

enough momentum to establish new structures.[87] Gardner concludes that the ability to negotiate these processes is a defining characteristic of those who we come to regard as exhibiting genius.[88] This finding aligns with sociologist Howard Becker's conclusion that most artistic mavericks become obscure historical footnotes, if indeed they are noticed at all.[89]

Finally, a relational account of creative practice must acknowledge the role of preexisting cultural artifacts as constituent elements of the network. This point is related to and builds from the path-dependency point made above. Preexisting artifacts don't simply channel current activity passively in one direction or another. The creative process is one of active engagement with and reinterpretation of those artifacts. Within both the study of art and the study of science and technology, there is considerable agreement on this point but much disagreement about exactly how to frame it. Postmodernist literary theory and the strict constructivist theory of technology alike hold that texts/technologies have no fixed meanings, but rather take on meanings ascribed by their readers. Both theories have been criticized for ascribing autonomy to human-generated artifacts. To conceive of artifacts as coequal, autonomous actors, however, is to miss the point; indeed, a central tenet of the sociology of science and technology is that technologies are not autonomous.[90] My point is a narrower one: To the extent that a cultural artifact, be it text or technology, permits a variety of uses and interpretations, both on its own terms and as juxtaposed with other artifacts, its developmental path is never wholly within anyone's control. Both its origins and its continuing relevance are determined by negotiation and renegotiation among the elements of the network.[91]

In particular, it is worth emphasizing that, like paradigm shifts in science, representational shifts in art rely heavily on both preexisting artifacts within the network and cross-fertilization between different 'fields' and 'domains.'[92] A paradigm-shifting scientific theory is not a departure from the old, but a reconceptualization of it to encompass anomalous observations that normal science within the preexisting paradigm could not explain. Some such theories are stimulated by fortuitous encounters

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87. *See*: Crane, *supra* note 76; Becker, *supra* note 77.
88. *See*: Gardner, *supra* note 82.
89. *See*: Becker, *supra* note 77, at pp. 244-246.
90. *See*, e.g., L. Winner, *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought*, Cambridge, MIT Press, 1977.
91. Cf. B. Latour, 'Technology is Society Made Durable', in J. Law (ed.), *A Sociology of Monsters*, London, Routledge, 1991, p. 103; M. Callon, 'Techno-Economic Networks and Irreversibility', in Law, *supra*, at 132. The 'actor network' theory developed by Bruno Latour and Michel Callon as a framework for understanding technological change is by no means a model of clarity. In particular, the theory's claims about the role of non-human 'actants' within the network are subject to considerable debate. I understand Latour and Callon to argue that artifacts are actors in the sense that they crystallize, more or less durably, symbolic and structural relationships.
92. This terminology follows Csikszentmihaly and Gardner, who distinguish between sets of technical and conceptual tools ('domain') and external social structures ('field'). *See* Csikszentmihalyi, *supra* note 82, at pp. 36-45; Gardner, *supra* note 82, at pp. 34-40; cf. Bourdieu, *supra* note 73.

with concrete, practical problems that previous theoreticians had not considered.[93] Historians of science also have observed that many paradigm-shifting theories are generated by scientists who migrate to one field after being trained in another.[94]

Similarly, representational shifts in art often rework and assimilate a broad and boundary-crossing array of inputs from the surrounding culture. Thus, for example, it is well known that around the turn of the twentieth century, many painters derived inspiration from traditional Japanese prints which were then in vogue in Paris.[95] The person credited with development of the technique of linear perspective that came to dominate Renaissance painting, Florentine architect Filippo Brunelleschi, was trained in the architect's techniques of measuring and surveying and had made an in-depth study of Roman architectural ruins; the famous experiment that he used to demonstrate the power of the technique appears to have relied heavily on his architectural training.[96] Twentieth-century American composer John Cage drew upon Chinese philosophy, as embodied in the *I Ching*, to introduce elements of randomness into his compositions. The 'African novel' is a hybrid cultural form that adopts the literary conventions of the colonial West.[97] Creative practice at its most creative is messy, free-wheeling, and opportunistic; people seize inspiration where they find it and pursue it wherever it leads.

For all of these reasons, it should be abundantly clear that talking about creativity and inspiration need not entail philosophical commitment to discredited romantic ideals of individual authorship and related notions of the natural rights of authors.[98] At the same time, we would do well to recognize that flight from romanticism in copyright scholarship has produced its own set of pernicious effects. It has become fashionable to regard authorship as an eighteenth-century invention. But matters are not so simple. Both the idea of authorship and the related idea of plagiarism (which necessarily presumes authorship) are far older than the idea of copyright.[99] Artistic creativity is contextual, collaborative, and mediated by artifacts and networks of artifacts, but it does not for all that cease to exist. To conclude that one cannot speak of creativity and inspiration to describe the spectrum of phenomena that characterize creative practice would validate the pure ideal of romantic authorship that the critique of authorship purports to discredit.

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93. *See*, e.g., P. Galison, *Einstein's Clocks, Poincare's Maps: Empires of Time*, New York, Norton, 2003.
94. *See* Simonton, *supra* note 82, at pp. 123-124.
95. For an illuminating discussion of this history and its implications for copyright doctrine, *see* P.E. Geller, '*Hiroshige Vs. Van Gogh*: Resolving the Dilemma of Copyright Scope in Remedying Infringement', 46 *J. Copyright Soc'y U.S.A.* 39-70 (1998).
96. *See* Boorstin, *supra* note 86, at pp. 384-94; Csikszentmihalyi, *supra* note 82, at pp. 32-34. As Boorstin notes, Brunelleschi may even have rediscovered perspective, which had been employed in a more free-form fashion by some ancient Greek and Roman craftsmen.
97. For a penetrating commentary on the early social construction of the African novel by the French literary establishment, *see* Randall, *supra* note 72, at pp. 238-240.
98. Nor to equally discredited ideals of natural law. My focus here is on understanding creative behavior, not on divining the platonic form of authors' rights.
99. *See* Randall, *supra* note 72, at pp. 32-59.

4. The common in artistic culture is not a separate place, but the common cannot be separated from considerations of space. Terms like 'path dependence' and 'cross-fertilization' are abstractions, and cannot by themselves constitute a functioning model of artistic culture and creative practice. The uncritical assumption that information is available because it is 'out there' is one of the central failings of the mainstream economic model and the associated public lands/cultural stewardship model of the public domain. If creative practice entails the opportunistic exploitation of a set of environmental resources, copyright policy must pay close attention to the structure of that environment.

Attempts to characterize the common in culture evoke spatial metaphors for good reason. Human societies exist in space as well as time, which means that artistic culture both produces and is produced by particular configurations of space that characterize social practice more generally.[100] Articulating a theory of the common in artistic culture in spatial terms therefore makes good sense, and may be inevitable. Edward Lee's formulation, the public's domain, has considerable promise to the extent that it characterizes access to the common in culture as a matter of right.[101] Yet to the extent that the word 'domain' connotes a space with defined boundaries and ownership, it is does not fit the phenomenon it is used to describe.

It is not the language of bounded space but rather the language of distributed spatiality – environment, landscape, network, milieu – that is more appropriate to convey the lived experience of the common in artistic culture. Experientially, the common in culture is the network of artifacts, communities, organizations and practices within which each person is situated. Although many predictors of creativity are internal, the network mediates the process by which creative disposition and motivation are translated into creative practice.

5. Creative practice will thrive most fully in an environment that is both information-rich and (relatively) uncontrolled. A legal regime intended to stimulate a rich outpouring of creative expression must ask what conditions are most likely both to foster the 'normal science' of everyday creative practice and to stimulate larger creative leaps, and to produce these effects in the spaces where people actually live. The centrality of borrowing, reworking, and cross-fertilization to creative practice suggests that creative practice will thrive under conditions that allow a substantial degree of unplanned, fortuitous access to and use of a variety of cultural goods.

Research in the social psychology of creativity confirms that access to resources within one's chosen field and domain(s), and within one's society generally, is of paramount importance. Creative practitioners need to know what their predecessors have done and what their peers are doing, not only to learn skills and gain entree to relevant social networks, but also so that the work itself will stimulate new associa-

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100. On the social production of space, *see* D. Harvey, *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*, Oxford, Blackwell, 1990; H. Lefebvre, *The Production of Space* (Donald Nicholson transl. 1971), Oxford, Blackwell; E.W. Soja, *Postmodern Geographies: The Reassertion of Space in Critical Social Theory*, London, Verso, 1989.
101. Lee, *supra* note 6.

tions and experiments.[102] The prevailing economic model of creativity acknowledges the desirability of access to preexisting creative works, but treats gradations in the quality of access as price points. Supporters of increased commodification, in particular, envision that creative individuals who desire unrestricted access will purchase it. Attention to the centrality of unmediated cross-fertilization and opportunistic borrowing in creative practice suggests that is approach is perverse, for it introduces the friction of transaction costs precisely where such costs will likely do the most harm.[103] It seems far more reasonable to predict that creative expression will flourish most abundantly when there is a substantial degree of freedom to determine the duration and nature of engagement with the resources found in one's cultural environment.[104] And if so, we might reasonably conclude that at least some of the time, copyright law should adjust to accommodate the constraints imposed by creative practice, rather than the other way around.

One might object that even if this argument is not based in natural rights per se, it nonetheless falls into a naturalistic fallacy of a different sort, in that it subscribes to an essentialist view of human nature and ignores the endogeneity of creative practice. A naturalistic conception of human creativity can even cut the other way: If creativity is a constant, who is to say that a regime of maximalist copyright will not yield unprecedented creative fruits? Law can reshape behavior with respect to the cultural environment, but that does not mean that creative practice will disappear. Indeed, pro-commodificationists argue just this.

In one sense, this objection is right. Artistic culture will not cease to evolve or to produce new and adventurous works even under conditions of more pervasive commodification. As postmodernist theory reminds us, under such conditions creative practice will simply seek new outlets.[105] We might safely posit, moreover, that creative practice will still be characterized by a pattern of 'normal science' intermixed with larger representational shifts, and will continue to manifest a resulting diversity. Within mainstream artistic culture, for every n *Joeys* or *Fear Factors*, there will be a *Six Feet Under* or *Sex in the City* to take critics and audiences by surprise. Other

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102. *See* Csikszentmihalyi, *supra* note 82, at 47–50, 53-55.
103. Heightened transaction costs to users arise principally from the need, whether real or perceived, to negotiate permissions processes and to predict ex ante the sort of access one expects to require. Csikszentmihalyi reports that, based on creative practitioners' own accounts, the success of the creative process hinges in part on the ability to avoid distractions. Csikszentmihalyi, *supra* note 82, at pp. 120-121.
104. An earlier, abbreviated version of this argument appears in Cohen, *Perfect Curve*, *supra* note 43; *see also* N. Elkin-Koren, 'Copyrights in Cyberspace – Rights Without Laws?', 73 *Chi.-Kent. L. Rev.* 1155-1201 (1998).

    I do not mean any of this to imply that creative practice cannot occur within corporate environments, among a more limited circle of collaborators. It does suggest, however, that special care must be taken in structuring the corporate environment to facilitate the activities and interests, including the non-monetary interests, of creative employees. For further discussion on this point, *see* R. Cooper Dreyfuss, 'The Creative Employee and the Copyright Act of 1976', 54 *U. Chi. L. Rev.* 590-647 (1987). Some corporate environments, such as Xerox PARC and IBM's Almaden Research Center, have been consciously designed with this goal in mind.
105. *See generally*: Coombe, *supra* note 70.

types of creative practice will continue outside the market system. To the extent that commodification requires both standardization and enforceability, it can't capture all of the ways in which preexisting cultural referents are invoked, with or without permission from their designated owners.

Ultimately, however, reliance on the resilience of creativity and creative practice to justify setting law and creative practice at odds seems profoundly misguided. There is abundant and growing evidence, across many different sectors of creative activity, of the price we pay for fear of copyright infringement lawsuits.[106] Psychologists studying the origins of creativity also have studied the ways in which environmental factors can stunt creativity, and have concluded that tying extrinsic motivation and controls too tightly to the conceptual stages of the creative process can both undermine motivation and diminish the creativity of the resulting work product.[107] The pro-commodificationist/cultural stewardship model of the public domain, which posits that heightened control over downstream uses of creative materials will increase creative 'progress,' would do well to take note of these results.

At bottom, my argument is a normative one. As David Lange and Eben Moglen have so eloquently argued, access to the cultural public domain is a matter of status, not of property.[108] Commodification of artistic culture places the law in opposition to the inherent creative faculties and tendencies that define what it is to be human and to exist in human society. This devalues what we purport to prize. If we as a society really wish to encourage creative practice, there is something perverse about adopting a legal regime that throws up omnipresent roadblocks to it. Instead, we need to decide which legal definition of the cultural public domain will produce the best set of conditions for creative practice generally. Although there are inherent tensions between a regime of ownership and conventions of opportunistic borrowing, copyright law's conception of the common in culture should align with creative practice to a far greater degree than it currently does.

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106. *See,* e.g., *Suntrust Bank v. Houghton Mifflin Co*., 268 F.3d 1257, 1282 (11th Cir. 2001) (Marcus, J., concurring) (describing testimony of author Pat Conroy about restrictions that the Margaret Mitchell estate sought to impose on would-be writers of the 'official' sequel to *Gone With the Wind*); P. Aufderheide and P. Jaszi, *Untold Stories: Creative. Consequences of the Rights Clearance Culture for Documentary Filmmakers*, Washington D.C., American University, 2004; L. Lessig, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity*, New York, Penguin Press, 2004; <www.illegal-art.org/>.
107. *See*: Amabile, *supra* note 82, at pp. 115-120, 231-232.
108. D. Lange, 'Afterword', 66 *L. & Contemp. Probs*. 463-483 (2003); E. Moglen, 'Anarchism Triumphant: Free Software and the Death of Copyright', in N. Elkin-Koren and N. Weinstock Netanel (eds.), *The Commodification of Information*, The Hague, London, Boston, Kluwer Law International, 2002, p. 107; cf. Lessig, *Future of Ideas*, *supra* note 43.

4. THE PUBLIC DOMAIN (AND COMMODIFICATION) RECONSIDERED

We return, finally, to the problem with which we began: how to understand the relationship between the public domain and the trend toward increased commodification in copyright law. The exploration of creative practice undertaken in Part 3 suggests that the copyright system should locate the 'public domain' very differently than it does. The common in culture is not a discrete preserve, but rather a distributed property of social space. Copyright law's construction of the relationship between the public and the proprietary should reflect the need for access to the distributed network of creative resources that produces and is produced by creative practice. This Part offers a different organizing metaphor for that project: that of the cultural landscape. This metaphor requires a rethinking of the doctrines that determine copyright breadth and depth during the copyright term. It also provides a more coherent framework for explaining the dangers that the commodificationist project poses.

4.1. FROM THE PUBLIC DOMAIN TO THE CULTURAL LANDSCAPE

If one asks where the common in artistic culture may be found, the answer, quite simply, is that it is everywhere the public is, and that unplanned, fortuitous access and opportunistic borrowing are matters of the utmost importance. Applying these insights, we can construct a new model of the relationship between the public and proprietary in copyright law, which I will call the *cultural landscape* model. The entitlements described by this formulation do not comprise a geographically or ontologically separate entity; instead, they are baseline rights of access to and engagement with the cultural landscape in which we all exist.

A useful starting point for this reformulation is James Boyle's call for a 'legal realism for the public domain' that hinges on disaggregation of the notion of publicness and recognition that 'many "public domains"' exist.[109] Some cultural resources will be partially or differently 'public,' and Boyle argues that this should not trouble us. As Boyle's nod to the Hohfeldian disaggregation of property implicitly recognizes, partially or differently public without the correlative partially or differently private is a *non sequitur*. Some cultural resources will be partially or differently private, but which? Those resources whose owners choose to administer them that way, or others as well? If only the former, geographic separation of the public from the private is (paradoxically) preserved. Boyle's endorsement of Yochai Benkler's vision of 'a predictive, critical conception of the public domain,' based on the range of uses that the public is privileged to make, hints at a very different vision.[110] Employing the language of symbolic logic rather than that of geography, one might formalize that

109. Boyle, *supra* note 17, pp. 67-69.
110. Id. at 68; *see* Benkler, *Free as the Air*, *supra* note 2.

vision by saying that the public domain is the domain of accessible knowledge.[111] But (as Boyle is well aware) even academics and judges, who are accustomed to such abstractions, do not think in symbolic logic or Hohfeldian correlatives and superimpose metaphors later; instead, it is the metaphors that do the mediating.

Another useful point of departure is Pamela Samuelson's conception of the public domain as comprising a 'core' and a number of 'contiguous terrains,' including a terrain 'consisting of some intellectual creations that courts have treated as in the public domain for some, but not all, purposes.'[112] In fact this formulation describes many of the contiguous terrains on Samuelson's map; partially or differently private is more the rule than the exception. More generally, as Samuelson's exposition of the map reveals, the terrains inside and outside the core overlap, merge and diverge in ways that we would not expect to see if public and private terrains were formally separate. These descriptions hint at a visual rendering of the 'public domain' that is not so much a map as a complex topology layered over and under and around domains that are 'private.'

In both of these important explorations of the relationship between the public and the proprietary, the 'public domain' metaphor stands revealed as doubly inapt. Just as the common in artistic culture is not a separate domain in the geographic sense, neither are the cultural resources that comprise it only those that we identify as 'public' with respect to ownership. An affirmative legal conception of the common in culture that respects creative practice will not flow from reifying the 'public domain' as such, but rather from adoption of an organizing metaphor that more clearly rejects formal and experiential separation. The cultural landscape is defined not by ownership status, but by the practical accessibility to creative practitioners of resources within it, including resources that copyright law counts as protectable and proprietary expression. This landscape is not static, but dynamic and relational; like the physical landscape, its perceived contents will vary as a function of both time and subjectivity (or collectivity). To facilitate creative practice, materials in the cultural landscape need to be legally as well as practically accessible, though they may be partially or differently accessible. Formulating rules that preserve the experiential baseline is copyright law's great challenge.

Locating the public aspects of culture in the cultural landscape also enables a conceptually coherent response to the constituent puzzles of the commodification problem: Commodification radically alters the public's relationship with the cultural landscape because it systematically reverses all of the implicit presumptions that individuals have historically brought to their experience of and participation in the development of culture. Each of the four puzzles describes an aspect of this reversal. Extensions of copyright duration threaten access to the cultural landscape because they substitute a presumption of ongoing private control for the richly uncontrolled opportunism of creative license. The progressive narrowing of copyright's exemp-

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111. G.B. Dinwoodie and R. Cooper Dreyfuss, 'Patenting Science: Protecting the Domain of Accessible Knowledge', this volume, p. 191.
112. Samuelson, *supra* note 2, at pp. 148-151.

tions and limitations and the inexorable expansion of copyrightable subject matter eliminate safety valves that have developed to mediate the tension between the legal fact of proprietary expression and the social fact of creative practice. The threat posed by the DMCA's anti-device provisions is different but equally immediate; the cultural landscape is defined not only by its existence, but also by its practical accessibility.

As copyright increases in length, breadth, depth, and strength, creative practice is squeezed to the margins. The costs of this displacement cannot be comprehended strictly in political or aesthetic terms, although those are significant costs.[113] Set against the backdrop of the habitual creative practice of both artists and ordinary people, a set of legal rules that asks people to adopt a permissions-based approach to their own cultural environment is inhumane and nonsensical. The changes wrought by commodification may be productive in one sense, but it is a productivity that concerns itself with the shadow of creativity rather than its substance.

The cultural landscape model inverts the traditional understanding of the public domain, in that the arguments for freedom to undertake creative borrowings are at their strongest in the case of mass culture, whether old or new. Yet that makes good sense. What is most firmly rooted in the public consciousness is not Shakespeare or Homer (except, perhaps, in the archetypal sense), but the products of culture industries ranging from Disney and AOL-Time-Warner to the Catholic Church and madrasas of radical Islam. The realm of copyrighted mass culture is also the realm in which there is the strongest need for legal safe harbor, because it is the arena in which one can be least sure of being protected by norms of borrowing that characterize both 'elite' and 'indigenous' cultural forms.[114]

Disdain for mass culture is in vogue among copyright scholars, particularly those of the conservancy/anti-commodificationist persuasion, but it is shortsighted. Although the flowering of amateur culture enabled by the Internet offers exciting possibilities, mass culture is, for better or worse, an equally vital part of the cultural landscape. Economically-minded scholarship addressing the so-called 'solidarity goods' phenomenon recognizes this, but then misses the point by complaining about the very attributes that make solidarity goods valuable: their standardization and their unregenerately middlebrow appeal.[115] Paeans to amateur culture, meanwhile, often fail to note that many of the forms of expression they cite as representatively amateur – musical 'mash-ups', compilations of information about movie and CD releases, weblog reproductions of articles culled from the mainstream media, and

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113. *See,* e.g., Benkler, *Free as the Air*, *supra* note 2; N. Weinstock Netanel, 'Copyright and a Democratic Civil Society', 106 *Yale L.J.* 283-387 (1996); M.J. Madison, 'Complexity and Copyright in Contradiction', 18 *Cardozo Arts & Ent. L.J.* 125-174 (2000).
114. For useful discussions of those norms in the context of musical borrowings, *see* Arewa, *Musical Borrowing*, *supra* note 67; Negativland, *supra* note 67.
115. *See*: G. Pessach, 'Copyright Law as a Silencing Restriction on Noninfringing Materials: Unveiling the Scope of Copyright's Diversity Externalities', 76 *South California L. Rev.* 1067-1104 (2003).

the like – build from a foundation laid by mass commercial culture.[116] All of this adds up to the conclusion that some degree of shared orientation to mass commercial culture is both inevitable and good, for amateurs as well as information plutocrats, and should be distinguished from the relative lock-in produced by copyright rules that place large sectors of the cultural landscape off limits to would-be borrowers.

It is this lock-in that a cultural landscape model should be tailored to address, by mediating between the competing realities of the economic organization of culture and the lived experience of individuals and groups. Jessica Litman observed in 1990 that the separateness of the public domain was at its inception little more than a highly useful fiction.[117] As copyright expands, and as mass copyrighted culture increasingly saturates the cultural landscape, that fiction is no longer sufficient to protect and preserve widespread public access to the raw materials of creative practice.

4.2. RECOGNIZING THE CULTURAL LANDSCAPE

Recognizing the cultural landscape demands a re-conception of copyright as incompletely commodified by design and more fundamentally by necessity. Translating this conception into practice will require both changes in interpretive stance and changes in underlying doctrine.[118] In their modern incarnations, the rights to prevent 'copying' and to control the creation of 'derivative works' recognize few boundaries. They are drafted extraordinarily broadly in the first instance, and have been extended even more broadly by the courts.

To begin, it is important to appreciate just how minimally copyright doctrine permits access to the cultural substrates essential to creative practice. Conventional wisdom holds that rights of access to cultural raw material are preserved by the 'idea-expression dichotomy' and its corollary principles of merger and *scenes a faire*,[119] but this access is more myth than reality. The merger doctrine permits copying of expression when there are so few ways of expressing the underlying idea that use of the expression is, as a practical matter, necessary. Courts interpreting the idea-expression dichotomy increasingly use merger as a limiting principle, and therefore extend copyright protection to anything for which variation was possible.[120] The *scenes a faire* doctrine, which is premised on a weaker conception of necessity dictated by audience expectation, permits copying of so-called 'stock'

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116. *See*, e.g., D. Hunter and F.G. Lastowka, 'Amateur-to-Amateur', 46 Wm. & Mary L. Rev. 951 (2004).
117. Litman, *The Public Domain*, *supra* note 17.
118. In the era of global copyright, these changes must occur in parallel at the national and international levels, but I will leave that discussion for another day.
119. *See*, e.g., *Eldred v. Ashcroft*, 537 U.S. 186, 217, 219 (2003); *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 580-582 (1985).
120. *See*, e.g., *American Dental Ass'n v. Delta Dental Plans Ass'n*, 126 F.3d 977, 980-81 (7th Cir. 1997); *see also*: *CCC Info. Svcs., Inc. v. Maclean Hunter Market Reports, Inc.*, 44 F.3d 61, 68-73 (2d Cir. 1994), *cert. denied*, 516 U.S. 817 (1995).

literary devices and standard technical features.[121] Even the latter doctrine, however, often rests on far too narrow a conception of the necessity that animates creative practice. Thus, one federal appeals court has held that a technical practice encoded in software cannot be considered *scene a faire* unless the plaintiff copyright owner also experienced it as dictated by industry standards, a rule that would preclude standard status for anything newly developed.[122]

The necessity that drives creative borrowing, and that copyright law should more fully reflect, is not the material's or the audience's but the creative practitioner's, and 'necessity' is probably the wrong word in any event. We might say that materials drawn from the cultural landscape are necessary inputs by virtue of their having been selected as inputs, but that usage strains ordinary meaning too far. It is simpler and more honest to say that borrowing from the cultural landscape should be deemed permissible in some circumstances because that is what people do, and because allowing people to do what they do has produced, over the centuries, artistic and intellectual expressions of breathtaking variety, beauty, and power in cultures the world over.

For similar reasons, the fair use doctrine also can't carry the burden of preserving rights of access to the cultural landscape. The primary weakness of the fair use doctrine is neatly encapsulated in the Second Circuit's decision in *Castle Rock v. Carol Publishing Co.*,[123] a case involving the right to publish a trivia guide to a popular television show. The court reasoned that 'derivative works that are subject to the author's copyright transform an original work into a new mode of presentation, [but] such works – unlike works of fair use – take expression for purposes that are not "transformative."' In a footnote, it added: 'Indeed, if the secondary work sufficiently transforms the expression of the original work such that the two works cease to be substantially similar, then the secondary work is not a derivative work and, for that matter, does not infringe the copyright of the original work.'[124] In other words, the universe of recognizable borrowings contains only two categories: derivative works (not transformative) and fair uses (transformative but still recognizable). Fair use is the inverse of derivative rights, which is another way of saying both that derivative rights have no logical boundaries of their own and that fair uses must necessarily be few and far between. If the law defines derivative rights broadly to encompass a near-absolute right of exclusion from all reasonably related markets, there will be little left for fair use to do. As we might suspect, the inquiry into 'transformative'

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121. *See*, e.g., *A.A. Hoehling v. Universal City Studios, Inc.*, 618 F.2d 972, 979 (2d Cir.) ('Because it is virtually impossible to write about a particular historical era or fictional theme without employing certain 'stock' or standard literary devices, we have held that *scenes a faire* are not copyrightable as a matter of law.'), *cert. denied*, 449 U.S. 841 (1980); *Computer Associates Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693, 709-10 (2d Cir. 1992) (applying this reasoning to computer program elements 'dictated' by factors such as compatibility requirements and customer demand).
122. *See*: *Dun & Bradstreet Software Services, Inc. v. Grace Consulting, Inc.*, 307 F.3d 197, (3d Cir. 2002), *cert. denied*, 123 S. Ct. 2075 (2003).
123. *Castle Rock Entertainment, Inc. v. Carol Publishing Group, Inc.*, 150 F.3d 132 (2d Cir. 1998).
124. Id. at 143 & n. 9.

use increasingly imports considerations of necessity similar to those that apply in the idea-expression setting.[125]

As Rebecca Tushnet has observed, moreover, recent efforts to save fair use by grounding it in the first amendment may end up narrowing fair use considerably. One may need to 'make other people's speeches' for a variety of reasons that first amendment theory either does not recognize or recognizes only at considerable cost to its own internal coherence.[126] It is worth observing, too, that resort to the first amendment creates an imperative to describe claimed fair uses in ways that are manifestly inaccurate. Alice Randall's novel, *The Wind Done Gone*, is not (only) a parody of *Gone With the Wind*, but rather a work far more complex in scope and ambition. The pressure to describe this work as something that it is not, and as something manifestly less subtle than it is, does it great violence, and teaches later authors to avoid subtleties that might call the 'parody' categorization into question.[127]

Instead, as perceptive commentators have begun to urge, the solution to copyright's overgrowth lies in a more disciplined approach to the basic rights themselves. With respect to copying, Ann Bartow has argued eloquently for judicial restraint in application of the substantial similarity doctrine.[128] In particular, it is hard to imagine how artists associated with defined schools or genres, such as impressionism or cubism, would have avoided current interpretations of that doctrine to extend protection to artistic style.[129] As several other commentators have recognized, making space for creative practice also requires more comprehensive limitations on the statutory grant of derivative rights.[130] The term 'derivative work' and accompanying statutory definition were intended to supply a medium- and technology-neutral framework that would cover a broad range of adaptations. However, the result has been a right that increasingly seems to encompass any recognizable adaptation of or reference to copyrighted expression.

One persuasive proposal for limiting derivative rights comes from Tyler Ochoa, who observes that some applications of derivative rights are troubling because they seem to allow copyright owners to reach even individual manipulation of creative works.[131] Ochoa's careful exposition of the problem suggests that derivative rights

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125. *See*, e.g., *Campbell v. Acuff-Rose Music, Inc*., 510 U.S. 569, 580-81 (1994) ('Parody needs to mimic an original to make its point, and so has some claim to use the creation of its victim's (or collective victims') imagination, whereas satire can stand on its own two feet and so requires justification for the very act of borrowing.').
126. R. Tushnet, 'Copy this Journal: How Fair Use Doctrine Harms Free Speech and How Copying Serves It', 114 *Yale L.J*. 535-589 (2005).
127. For more detailed discussion of this point, *see* Note, 'Originality', 115 *Harv. L. Rev*. 1988-2008 (2002).
128. A. Bartow, 'Copyrights and Creative Copying', 1 *U. Ottawa L. & Tech. J*. 75-103 (2003-04).
129. *See*, e.g., *Steinberg v. Columbia Pictures Indus., Inc*., 663 F. Supp. 706 (S.D.N.Y. 1987).
130. *See,* e.g., L. Pallas Loren, 'The Changing Nature of Derivative Works in the Face of New Technologies', 4 J. Small & Emerging Bus. L. 57-93 (2000); R. Okediji, 'Givers, Takers, and Other Kinds of Users: A Fair Use Doctrine for Cyberspace', 53 *Fla. L. Rev*. 107-181 (2001), at pp. 140-143.
131. T. Ochoa, 'Copyright, Derivative Works and Fixation: Is Galoob a Mirage, or Does the Form(Gen) of the Alleged Derivative Work Matter?', 20 *Santa Clara Cptr. & High Tech. L.J*. 991-1044

were most likely intended principally to safeguard the other four exclusive rights, and that courts recognizing freestanding derivative rights may have gone beyond what Congress intended. His proposal to reconceive derivative rights as dependent rights would shield many private or consumptive alterations of copyrighted works.

Tying derivative rights more closely to the other copyright rights, however, by itself would not be enough to secure baseline rights of access to the cultural landscape, because it would not address the problem of ever-expanding liability for creators of mass-distributed works that invoke, in same way, the content of preexisting cultural raw materials. Here what matters most, and cannot be avoided, is the extent of a creative work's availability for borrowing and/or reworking: in other words, the questions that are commonly perceived to lie at the derivative work right's economic and moral core. If copyright law is to recognize a right of creative access to the cultural landscape, it is precisely this right that must be limited, yet that is precisely what copyright law increasingly refuses to do. Instead, conventional wisdom holds that any curtailment of derivative rights would reduce 'incentives' to invest in works of mass culture.[132] This argument is to some extent normative (and to that extent it is addressed above) and to some extent instrumental; the line between desirable and undesirable truncation of 'incentives' is difficult to discern.

The solution to this problem, though, is not to throw up one's hands and declare that the economic rights of copyright owners cannot be limited in any principled way and therefore should not be limited at all. As the Creative Commons model shows, there are other, entirely defensible, ways of apportioning the derivative work right.[133] For example, one might think it desirable, for either economic or moral reasons, to treat noncommercial reworkings one way and commercial reworkings another.[134] There are many possible ways of doing this. Commerciality might be determined, as is conventional in many other contexts, by asking whether the second-comer intends to profit from the reworking. Alternatively, a commercial-noncommercial distinction might be drawn to place painting, sculpture, and similar limited-edition efforts on the noncommercial side of the line along with not-for-profit reworkings even though works in the former category might be sold. Commercial reworkings could be subject to a property rule, as is currently the case, or could be allowed upon satisfaction of some nondiscriminatory threshold criterion, such as payment of a fixed fee or passage of a certain period of time.[135]

(2003).

132. The classic form of this argument is Paul Goldstein's. *See*: P. Goldstein, 'Derivative Rights and Derivative Works in Copyright', 30 *J. Copyright Soc'y* 209-242 (1983), at p. 227.
133. *See* <creativecommons.org/license/>.
134. For an insightful discussion, *see* Litman, *supra* note 43, at pp. 180-182.
135. Lawrence Lessig reminds us that many resources considered 'commons' are subject to such rules. Lessig, *supra* note 43, pp. 19-20. If a fee-based process were thought to pose too great a barrier to access, an artists' fund created via levy may provide a partial solution. For a concise treatment of the use of 'artificial lead time' to mediate the incentives/access problem *see* J.H. Reichman, 'Legal Hybrids Between the Patent and Copyright Paradigms', 94 *Colum. L. Rev.* 2432-2558 (1994), at pp. 2547-48.

Arguably, even a commercial/noncommercial distinction is insufficiently nuanced to adjust to the many forms that creative practice takes. By focusing first on (admittedly crude) categories of creative practice rather than on market-driven categorization, one could generate a more detailed set of categories – for example, sequels, audiovisual adaptions of literary works, fine art interpretations of material from literary or cinematic works, mass-market interpretations of such material (e.g., toys), reference guides, and so on – and develop slightly different rules for each category. For US copyright scholars, this suggestion will be powerfully counterintuitive, because it evokes the much-reviled categorical structure of the 1909 Copyright Act. It is worth remembering, however, that it is not the 1909 Act's formalism but rather the 1976 Act's functionalism that has gotten us into the current predicament. It is long past time to acknowledge that the legal realist turn in intellectual property thinking, as in property thinking, may not have had the moderating effect that its initiators intended.[136] In addition, there are other ways of tempering perceived costs to authors' rights. For example (and, once again, as the Creative Commons model allows), the law could acknowledge the sense of authorial ownership in creative works, even works of mass culture, by requiring that secondcomers give appropriate credit for certain types of reworkings.[137]

One reasonable question is whether the growing success of the Creative Commons movement, which is premised on voluntary adoption of many of these limits, might make formal limitation of derivative rights unnecessary. As already discussed, however, the cultural landscape cannot be defined without reference to works of mass culture, including mass copyrighted culture. Widespread adoption of the Creative Commons framework by amateur authors will not guarantee sufficient access to large sectors of the cultural landscape – unless proprietors of mass copyrighted culture also opt in.

To be sure, limiting derivative rights in any of the ways suggested here would affect the 'level' and 'direction' of investment in creative works of mass culture.[138] It is far from clear, however, that this objection should matter when weighed against the extent of copyright law's mismatch with creative practice. Current creators may demand certainty and completeness of entitlements, but future creators require leeway to imitate, borrow, and rework. A copyright law that is faithful to creative practice must honor both demands.

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136. Compare, e.g., F.S. Cohen, 'Transcendental Nonsense and the Functional Approach', 35 *Colum. L. Rev.* 809 (1935), at pp. 816-817 ('It does not follow, except by fallacy of composition, that in creating new private property courts are benefiting society.'), *with,* e.g., Goldstein, *supra* note 132, at 217 ('[The reproduction and derivative work rights] give a prospective copyright owner the incentive to make an original, underlying work, the exclusive right to make new, successive works incorporating expressive elements from the underlying work, and the incentive and exclusive right to make still newer, successive works based on these.').
137. For a similar suggestion, *see* D. Lange and J. Lange Anderson, *Copyright, Fair Use, and Transformative Critical Appropriation*, Working paper 2002, at p. 26, <www.law.duke.edu/pd/papers/langeand.pdf>.
138. Goldstein, *supra* note 132, at p. 227.

4.3. THE POSTCOLONIALIST CRITIQUE

A cultural landscape model of the public aspects of culture must contend, finally, with a powerful critique from the left. This critique is grounded in the postcolonial studies movement, and maintains that the debate about the scope of copyright rights and limitations is addressed exclusively to the concerns of the industrialized world. An especially thoughtful statement of this position comes in a recent article by Anupam Chander and Madhavi Sunder, who argue that the 'romance of the public domain' is itself a powerful instrument for subordination of non-Western cultures.[139] As Chander and Sunder explain, the legal construct of the public domain systematically operates to facilitate exploitation of traditional and/or collective forms of cultural expression by outsiders, while at the same denying the originating cultures the opportunity to control or at least profit from the exploitation.

Chander and Sunder are, without a doubt, correct to argue that the public domain movement, as currently conceived, is no friend to traditional cultures. As they recognize, however, the public domain movement and the indigenous rights movement are not necessarily incompatible. The postcolonialist critique does not entail a rejection of the public domain, but only of a particular, categorically absolute way of thinking about it. Advocates of traditional cultures have a comparatively modest claim to press. They simply seek to recapture for indigenous societies some measure of control over exploitation of their cultural products by outsiders.[140] Their embrace of intellectual property is partial and deeply ambivalent, but it is an embrace nonetheless. In this respect, the postcolonialist critique echoes the critical race theorists' response, several decades ago, to proclamations by the critical legal studies movement about the 'death of contract' and the irrelevancy of rights.[141]

Thus understood, the postcolonialist critique of the public domain suggests a targeted reformulation that has much in common with the cultural landscape approach proposed here. Both approaches seek to complicate copyright, replacing its foundational private/public dichotomy with a more complex and fertile mix of rights and privileges. Implementing the cultural landscape model would entail recognition that some 'proprietary' cultural resources are partially (and differently) public; addressing the postcolonialist critique would require recognizing some 'public' or 'communal' cultural resources as partially (and differently) private.[142] Conceptually, the two approaches are more consistent than contradictory, and might easily be paired with one another.

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139. A. Chander and M. Sunder, 'The Romance of the Public Domain', 92 *Cal. L. Rev.* 1331-1373 (2004); *see also*: Arewa, *Cultural Hierarchies*, *supra* note 72; R.J. Coombe, 'Fear, Hope, and Longing for the Future of Authorship and a Revitalized Public Domain in Global Regimes of Intellectual Property', 52 *DePaul L. Rev.* 1171-1191 (2003).
140. *See*: Chander & Sunder, *supra* note 139; Coombe, *supra* note 139.
141. *See*, e.g., P.L. Williams, *The Alchemy of Race and Rights*, Cambridge (Mass.), Harvard University Press, 1991, pp. 146-154.
142. Chander & Sunder, *supra* note 139, at pp. 1354-1372; cf. Ostrom, *supra* note 56 (suggesting economic criteria for narrowing the 'public' to which particular portions of the public domain belong).

5. CONCLUSION

Beliefs about what legal definition the public domain requires depend crucially on implicit preconceptions about what a 'public domain' is. I have argued that the term 'public domain' is burdened with associations more broadly congruent with the pro-commodificationist project than is commonly acknowledged. More fundamentally, I have argued that the right approach to the relationship between the proprietary and the public in copyright law is not to be derived by interrogating nineteenth-century legal concepts, nor by studying markets for creative products or modeling information as an autonomous system, but rather by more careful attention to creativity as a social phenomenon manifested through creative practice. The preliminary outline of a social theory of creativity offered here has emphasized the relational, emergent nature of creative practice. Much work remains to be done in understanding and elaborating the creative process. It seems, however, that the public domain may require not so much a reification as a reformulation. Experientially, the common in culture is distributed and disaggregated. It is neither geographically nor formally separate, nor is it composed only of that which is publicly owned. If so, the legally constituted common should both mirror and express this disaggregation. The cultural landscape is a likely candidate for both jobs.

Chapter VIII

Database Protection: The Commodification of Information

Mark Davison

This chapter attempts to provide some insight into the relationship between the creation of *sui generis* database rights in the European Union in the late 1990s ('the *sui generis* right') and the future of the public domain. As with most expansions of intellectual property rights, it is unlikely that the *sui generis* right will be abolished and little is to be gained by campaigning for its total abolition. However, much can be learned from the process by which the EU Directive on the legal protection of databases ('The Directive')[1] was adopted by the European Union (EU) and the process by which the introduction of new database legislation has been successfully resisted in the United States. In addition, it may be possible to engineer some adjustments to the *sui generis* right which may be beneficial and shed light on future issues relating to the scope of the public domain.

The chapter is divided into the following sections:

1. An overview of the Directive.
2. The history of the Directive and American proposals for legislation on the topic.
3. Lessons that can be learned by the respective EU and American processes for developing legislation on database protection and suggestions for the future.
4. The public domain in the context of the database debate.

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1. Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, *OJ* 1996 L 077/20 [hereinafter referred to as 'Directive'].

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 167–189

1. AN OVERVIEW OF THE DIRECTIVE

The Directive was a response to perceived needs to harmonize protection for databases within the EU and to provide greater protection for the investment in the creation and maintenance of databases.[2] The first part of the Directive responded to the first of these needs by harmonizing the standard of copyright protection for databases. Prior to the Directive, the standards of originality for copyright protection varied widely throughout the European Union. Common law countries such as England and Ireland had a 'sweat-of-the-brow' or industrious collection standard which conferred copyright protection if the author could demonstrate the investment of a considerable amount of labor in the production of the database. Many other countries such as Germany and France applied a far higher standard of originality that required intellectual input from the author in determining the selection and arrangement of data.[3] The uniform standard adopted in the Directive is similar to, if not identical with, the standard of originality for copyright works prescribed for American law by the Supreme Court of the United States in *Feist Publications Inc v. Rural Telephone Co*.[4] This standard confers copyright protection on 'databases which, by reason of the selection or arrangement of their contents, constitute the author's own intellectual creation'.[5]

The second part of the Directive requires Member States to confer a previously unknown *sui generis* right for the protection of databases on any database owner that demonstrates that it has made a substantial investment, either quantitatively or qualitatively, in obtaining, verifying or presenting the contents of a database.[6] It is illegal to extract or re-utilize a substantial part of the contents of that database without the database owner's consent.[7]

While this is called a new *sui generis* right, there are considerable similarities between it and 'sweat-of-the-brow' copyright that confers protection on the labor invested in collecting or presenting data and does not require any creativity in relation to the selection and creativity of the information.[8] The Directive requires the granting of 'a right of extraction and re-utilization', but an examination of the definition of that right quickly reveals that this one right is in fact the bundle of rights conferred on copyright owners that are relevant in a database context. For example:

'Extraction' is defined as 'the permanent or temporary transfer of all or a substantial part of the contents to another medium by any means or in any form'.[9] This is the right of reproduction.

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2. *See* Chapter 6 of the EC Green Paper on Copyright and the Challenge of Technology 1988, COM (88) 172 Final.
3. *See* M. Davison, *The Legal Protection of Databases*, Cambridge University Press, 2003, Chapter 2.
4. 499 US 340 (1991).
5. Article 3(1) of the Directive.
6. Article 7(1) of the Directive.
7. Ibid.
8. *Telstra Ltd v. Desktop Marketing Pty Ltd*, [2001] Federal Court of Australia 612.
9. Article 7 of the Directive.

'Re-utilization' is defined as 'any form of making available to the public all or a substantial part of the contents of a database by the distribution of copies, by renting, by on-line or other forms of transmission.'[10] This encapsulates all the other rights of a copyright owner relevant to a database.

Similarly, the Directive adopts other copyright terminology such as the concept of a 'substantial part, evaluated qualitatively and/or quantitatively', to determine whether infringement has taken place.[11]

1.1. MORE THAN JUST COPYRIGHT

In fact, in some respects the *sui generis* right exceeds the protection conferred by 'sweat-of-the–brow' copyright. A few examples of that additional protection are listed below:

1. The duration of protection is, in theory, limited to 15 years. In practice, it is probably perpetual provided the database is periodically updated, where updating can include simply re-verifying the accuracy of the information contained in it.[12] In other words, protection is for 15 years or eternity, whichever is longer.
2. The test of infringement refers to the taking of a substantial part of the database, whether determined qualitatively or quantitatively.[13] The introduction of 'qualitative' issues into the protection of sweat raises some alarming possibilities. Apart from the obvious lack of relevance of 'qualitative' issues in protecting sweat, it raises the specter of database owners seeking protection for one or a few items of information on the basis that they are 'qualitatively' significant. This provision will undoubtedly be used to claim protection for quantitatively small pieces of information that are allegedly qualitatively significant.[14]
3. The exceptions are considerably more limited than those for copyright. The main exception allows the extraction of the contents of the database for illustration for teaching or scientific research as long as the source is indicated and the extraction is limited to the extent justified by the non-commercial purpose.[15] There is no right of re-utilization for these purposes, which means that while the information can be reproduced it can not be

10. Ibid.
11. Ibid.
12. Article 10 of the Directive. *See also* Recital 55 of the Directive which provides that 'a substantial new investment involving a new term of protection may include a substantial verification of the contents of the database.
13. Article 8 of the Directive.
14. The latest American legislative proposal is restricted to the taking of a quantitatively substantial part of a database. *See* the discussion of 'The Current Proposal' below.
15. Article 9 of the Directive.

redistributed. Even this exception is not compulsory and some EU countries, particularly Ireland, France and Italy have not incorporated them fully into their transposing legislation.

4. There is no right of fair dealing for news reporting.

The end result of these and other aspects of the Directive is that databases get significantly more protection in Europe via the *sui generis* right than copyright works which must manifest greater intellectual input.

1.2. CASE LAW RELATING TO THE DIRECTIVE

There have been a number of cases invoking the Directive and its transposing legislation. Space constraints prevent a detailed discussion of all that case law,[16] but it is useful to identify some key themes that have emerged from the decided cases. First, most of the decided cases have involved wholesale copying of quantitatively substantial amounts of data for commercial purposes. Second, a large number of the cases refer to what Maurer, Hugenholtz and Onsrud[17] describe as 'synthetic' information, information which is generated by the database owner itself and therefore can not be replicated by anybody else. Examples of such cases are telephone directory cases, a case concerning real estate listings and a case involving the British Horseracing Board and its database of horse races in Britain.

Conflicting interpretations of the Directive resulted in the referral of four cases to the European Court of Justice (ECJ)[18] and the decisions in those cases were handed down on the 9th of November 2004. The effect of the decisions is to significantly reduce the potential scope of the Directive although considerable difficulties remain with both the application of the principles espoused in the decisions and various aspects of the Directive.

The most complex of the four cases related to a database of horse racing information maintained by the British Horseracing Board ('BHB'). The defendant in that case, off-track betting company William Hill, had obtained racing data via a third party, which was licensed to access and use the BHB's database. The information was used by William Hill to supply racing information to its betting clientele. The quantity of data used by the defendant on any one occasion was quite limited; it used only the dates, times and places of races together with the names and numbers

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16. For a discussion of some of the case law, *see*: M. Davison, *The Legal Protection of Databases*, Cambridge, Cambridge University Press, 2003, Chapter 4.
17. S.M. Maurer, P.B. Hugenholtz and H.J. Onsrud, 'Europe's Database Experiment', 294 *Science* 789-90 (2001).
18. Case C-338/02, *Fixtures Marketing Ltd v. Svenska AB (Svenska)*, [2004] ECR I-10497; Case C-444/02, *Fixtures Marketing Ltd v. Organismos Prognostikon Agonon Podosfairou EG (OPAP)*, [2004] ECR I-10549; Case C-46/02, *Fixtures Marketing Ltd v. Oy Veikkaus Ab (Oy Veikkaus)*, [2004] ECR I-10365; Case C-203/02, *British Horseracing Board Ltd v. William Hill Organization Ltd (BHB decision)*, [2004] ECR I-10415.

of horses running in those races. The BHB's database contained considerably more information, such as data on horse ownership, breeding and identification, as well as details of their jockeys and trainers.

The other three cases related to the fixtures of English and Scottish football. The organisers arranged for the exploitation of their fixtures lists to be handled by Fixtures Marketing Limited ('Fixtures') in respect of exploitation outside of the United Kingdom. Fixtures brought actions against betting companies in Greece, Sweden and Finland, which used parts of the fixtures lists for their pools betting operations. In any one week, the defendants would use about a quarter of the matches to be played in the Premier League and other divisions in their pools forms.

While a number of questions concerning these cases were referred to the ECJ, the key principle established by the ECJ was that in determining whether a database owner has made the necessary substantial investment in obtaining, presenting or verifying information, courts must disregard any investment in the creation of the information so obtained, presented or verified. It clearly rejected the proposition that 'obtaining' information includes creating information.[19] One consequence of this proposition was that the ECJ did not consider that the relevant substantial investment had been made in the database of football fixtures. The vast majority of the investment by the various leagues in producing their fixtures related to the creation of those fixtures, not to obtaining, presenting or verifying them. In this regard, the Directive departs significantly from copyright cases in which common law courts have given considerable credit to authors for the activities involved in creating data as well as presenting it. For example, various copyright cases have conferred copyright on football fixtures,[20] the internal telephone directories of companies[21] and even a list of winning lottery numbers because of the effort involved in devising the lottery game and determining how many numbers to draw and to include in the draw.[22]

In addition to finding that no relevant substantial investment had been made in the football fixtures, the ECJ formed the view that there had been no relevant substantial investment in that part of the BHB database that had been re-utilised by the defendant. The majority of the investment in that information had been in its creation during the process of determining runners for the various races organised by the BHB rather than in obtaining, presenting or verifying it.

Despite these limitations on the potential scope of the Directive, a number of difficulties remain. In particular, the distinction between creating data on the one hand and obtaining, verifying or presenting it on the other hand will be difficult to make in many circumstances. For example, do scientists obtain data such as the genetic sequences of organic material or do they create the data in the process of their observation of naturally occurring phenomena? In addition, database owners will take steps to circumvent the effects of the ECJ's decisions. The decisions, especially

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19. *See*: Oy Veikkaus Ab decision, par. 44.
20. *See*: *Football League Ltd v. Littlewoods Pools Ltd*, [1959] 1 Ch 637 at 651-2.
21. *Seven Network (Operations) Ltd v. Media Entertainment and Arts Alliance*, [2004] FCA (Federal Court of Australia) 637.
22. *Mirror Newspapers Ltd v. Queensland Newspapers Pty Ltd*, [1982] Queensland Report 305.

the BHB decision, disregard investment in collecting, presenting and verifying information during the process of its creation,[23] but acknowledge the possibility that obtaining, verifying or presenting information subsequent to its creation may constitute the necessary investment to obtain the benefit of the *sui generis* right.[24] Database owners are likely to restructure their procedures to ensure this occurs, thus obtaining the benefit of the right.

In addition, while the ECJ was clearly keen to avoid protection for individual datum, de facto protection for the contents of a database could still quite easily flow due to the lack of any direct correlation between the investment necessary to obtain the *sui generis* right and the test for infringement of that right. In copyright, for example, originality determines both the entitlement to copyright protection and the issue of infringement as infringement only occurs if what is taken is original. With the *sui generis* right, protection is conferred if there has been a substantial *investment* in obtaining, verifying or presenting the information, but infringement occurs if there is an extraction or re-utilization of a substantial part of the *contents* of the database. Consequently, a database owner may create a great deal of data and then subsequently make it available only via its database. If the owner can demonstrate that it has also made a substantial investment in obtaining or presenting the data as well as creating it, it can then prevent the extraction or re-utilization of its created data even though the protection of the *sui generis* right is supposed to be directed solely at the investment in obtaining, verifying or presenting data rather than its creation.

The ECJ addressed the issue to some degree with its comments on the nature of a substantial part of the contents of a database but, as noted above, a substantial part can be measured quantitatively or qualitatively and this suggests that an investment in obtaining even piece of data may be sufficient for it to constitute a substantial part of a database. The effect of this would be to confer de facto protection on the information itself, especially in those circumstances where the database owner has created the information and is therefore the sole source of that information. Consequently, despite the restrictions placed on the Directive's potential operation by the ECJ's decisions, the extent of protection for data provided by the Directive may still be very substantial. This protection is also the greater as a consequence of the differences between the *sui generis* right and copyright that are listed in the previous heading.

2. THE HISTORY OF THE DIRECTIVE AND AMERICAN PROPOSALS

The history of the adoption of the Directive, particularly when contrasted with the American situation, provides some useful lessons about the process by which new

23. BHB decision, par. 39-41.
24. Id. Par. 35.

intellectual property rights such as the *sui generis* right are created and the public domain may be degraded. The very different outcomes of these processes also cast a great deal of light on the effect (or lack of effect) of the Directive on the creation of databases and whether there was any real need for the new *sui generis* right, which has now been adopted throughout the European Union and which has spread via bilateral arrangements with the European Union to a number of other countries.

2.1. THE DIRECTIVE

The initial proposals of the EU were based on unfair competition principles. The *sui generis* right was to only apply to extraction or re-utilization for commercial purposes.[25] The explanatory memorandum accompanying the first draft of the Directive (First Draft)[26] that was released in May 1992, stated:

> 'This protection against parasitic behaviour by competitors, which would already be available under the unfair competition law in some member states but not in others, is intended to create a climate in which investment in data processing can be stimulated and protection provided against misappropriation. It does not prevent the flow of information, nor does it create any rights in the information as such.'[27]

There were also some very significant restrictions on the scope of the proposed *sui generis* right. For example, the First Draft limited additional rights to electronic databases; no *sui generis* right was conferred if the contents of the database were already protected by copyright; a right was conferred on lawful users of a database to use insubstantial parts of databases; there was provision for compulsory licensing and the original period of protection was only ten years, the same as then existed under the Scandinavian catalogue laws.[28]

Most of these basic aspects of the First Draft were retained in amendments proposed by the European Parliament in 1993[29] and if the basic model encapsulated within the First Draft and those amendments had been retained, it would have met the needs of almost every plaintiff that has successfully brought proceedings in Europe under the new legislation. Just about all the case law invoking the Directive and its transposing legislation deals with situations in which the defendant has pressed the copy button, copied all or almost all of a database and then used that copy in

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25. Proposal for a Council Directive on the legal protection of databases COM(92) 24 final – SYN 393 Brussels, 13 May, 1992.
26. Ibid.
27. Paragraph 3.2.8 of the Explanatory Memorandum for a Proposal for a Council Directive on the legal protection of databases, COM (92) 24 final – SYN 393 Brussels, 13 May, 1992.
28. Proposal for a Council Directive on the legal protection of databases COM(92) 24 final – SYN 393 Brussels, 13 May, 1992.
29. A3-0183/93 OJ 1993 No C194, 23rd June, 1993, p. 144.

some commercial setting to compete directly with the plaintiff or appropriate a substantial part of the plaintiff's market for its database. Instead, the final version of the Directive adopted on 11th March, 1996 contained the strong property right described above.

2.2. THE AMERICAN PROPOSALS

The United States Congress has debated the issue of some form of protection for databases or collections of information since the mid-1990's. The American process is almost the complete reverse of the European process. The Americans started where the EU finished and they will probably finish where the EU started. The first proposed legislation on the topic was basically a cut and paste from the Directive.[30] Since then every piece of proposed legislation has purportedly been a statutory variation of the common law tort of misappropriation that is recognized by the majority of American states and which is similar to the unfair competition concepts that underpinned the First Draft.

The American tort of misappropriation has experienced quite a revival in recent times in the US after experiencing considerable difficulties following its creation by the US Supreme Court in 1918 in *International News Service v. Associated Press*.[31] The key aspect of the tort that has been adopted into the various proposals is that the database owner has to demonstrate some damage to its market for the database. The rationale for this being that the owner needs to demonstrate that the actions of the alleged infringer have had a significant impact on the incentive to create and disseminate the collection of information.

The debate has concentrated on what level of damage is sufficient to discourage investment in databases. The publishing industry has basically contented that any unauthorized use of a database damages the owner's market, whereas more recent proposals suggest a higher threshold of damage. For example, under the 1999 proposals, an owner of a collection of information would only have had rights in respect of markets in which the owner was already offering a product or service incorporating the collection of information and related markets in which the owner had already taken demonstrable steps to offer products in commerce within a short period of time.[32] An even higher onus to prove damage is imposed under the latest proposals which are discussed in the next section.

In addition, the opponents of strong *sui generis* rights won other major concessions. Hence, the 1999 proposals contained quite generous exceptions. These included an equivalent to the American copyright defense of fair use, exceptions in respect of reporting the news, exceptions concerning access to government information and exceptions for the purpose of research or education.[33]

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30. Database Investment and Intellectual Property Antipiracy Act of 1996, HR 3531 of 1996.
31. *International News Service v. Associated Press*, 248 US 215 (1918).
32. *See* HR 354, 106th Congress for details of the 1999 proposals.
33. *See* the proposed Collections of Information Antipiracy Act HR 354, 106th Congress, 1999.

In addition, the period of protection was limited in that individual items of information would have fallen into the public domain as soon as they were publicly available for 15 years or more and the onus would have rested on the database owner to prove that information had been available for less than 15 years. If there were doubt, the user would have been entitled to assume that the material had been available for more than 15 years.

Despite the publishing lobby acceding to these apparently major concessions, they were considered inadequate by the opponents of the legislation and the proposed legislation lapsed at the end of the 106th Congress. After that, Monica Lewinsky, Osama bin Laden and Saddam Hussein diverted much of the energy that would otherwise have been devoted to the issue.[34]

2.2.1. The Current Proposal

However, the issue has recently been revised by the proposal of the Database and Collections of Information Misappropriation Bill (H.R. 3261),[35] which has been considered by the House Committee on the Judiciary and its Subcommittee on Courts, the Internet and Intellectual Property. It has now been referred to the House Committee on Energy and Commerce. In the consideration of the many bills proposed to date, the Judiciary Committee has tended to be a pro-database owner's committee and the Energy and Commerce Committee has tended to favor pro-user perspectives.

The Nature of the Rights

The latest proposal is firmly based on misappropriation principles. For example the relevant prohibition is against making available in commerce to others a quantitatively substantial part of the information in a database generated, gathered or maintained by another person if:

1. The database was generated, gathered or maintained through a substantial expenditure of financial resources or time;[36]
2. The unauthorized making available in commerce occurs in a time sensitive manner and inflicts injury on the database or a product or service offering access to multiple databases;

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34. During 2001 joint meetings of the Judiciary Committee and the Commerce committee were held in an attempt to produce legislation based on a consensus of the opposing viewpoints. At the time of writing, no new legislation had been proposed.
35. Database and Collections of Information Misappropriation Act, H.R. 3261, 108th Congress, 1st Session, 8 October 2003.
36. Presumably inelegancies in drafting will be resolved during the legislative process. For example, it is not obvious how one could 'gather' a database as opposed to the information in the database.

3. The ability of other parties to free ride on the efforts of the plaintiff would so reduce the incentive to produce the product or that its existence or quality would be substantially threatened.

These three requirements are all conjunctive and are the basis of modern statements of the tort of misappropriation accepted by most US states.

The proposal provides that inflicting an injury on the database means serving as 'a functional equivalent in the same market as the database in a manner that causes the displacement, or the disruption of the sources, of sales, licenses, advertising or other revenue.' It also provides that in determining whether the making available in commerce has occurred in a time sensitive manner, 'the court shall consider the temporal value of the information in the database, within the context of the industry sector involved'.

The Permitted Acts

The proposal also provides for a number of exceptions, including the independent generation or gathering of information. More importantly, the making available in commerce by a nonprofit educational, scientific, and research institution for nonprofit educational, scientific and research purposes is not prohibited if the court determines that the making available is reasonable under the circumstances, taking into consideration the customary practices associated with such uses of such database by nonprofit educational, scientific, or research institutions and other factors that the court determines relevant.

Hyperlinking is not restricted by the proposal and news reporting is not affected by the proposal unless the information is time sensitive and has been gathered by a news reporting entity and making it available in commerce is part of a consistent pattern engaged in for the purpose of direct competition.

Even if this proposal is passed in its present format without further amendments, it will be very different from the Directive. Nevertheless, since it is based on unfair competition principles similar to those that inspired the First Draft, the publishing industry obviously considers it sufficient to meet the majority, if not all, of its needs knowing that the proposal has come through the committee that has acted as its voice.

2.2.2. Why the Differences do not Matter

At the time of writing, the United States has still not passed legislation and the conflicting legal positions in the EU and the United States have provided a real world laboratory in which to judge the impact of the Directive. Since at least 1990,

the United States has had a copyright regime relating to database protection that is very similar to the current copyright position in the EU.[37] However, unlike the EU, it does not yet have a *sui generis* right and no publisher would have realistically relied upon the introduction of such a right in light of the legislative gridlock that has gripped the issue in America.

If the advocates of the *sui generis* right were correct in their prediction that the introduction of the right would ensure an increase in publishing activity in the EU, then the effect of the *sui generis* right would be obvious.[38] The EU would have produced a vastly greater number of databases since transposing legislation came into effect from 1998 and the American publishing industry would have been brought to its knees by the transfer of investment to Europe. Neither event has occurred.[39]

One can readily explain why this is so. The American provisions on circumvention of copyright protection devices were incorporated into the Digital Millennium Copyright Act of 1998 ('the DMCA').[40] The American legislation came into effect in October 1998 although the circumvention provisions were expressed to take effect in October 2000.[41] Section 1201 provides a basic prohibition against unauthorised circumvention of technological measures. In addition to this basic prohibition, there is a further prohibition on the manufacture or commercial dealing with circumvention devices.

There are a number of specific exceptions, but there is no general right to engage in circumvention for the purposes of taking advantage of the exceptions to copyright, particularly the defense of fair use.

In addition, section 1201(a)(1)(B) and (C) empower the Librarian of Congress to determine that the circumvention provisions do not apply to 'persons who are users of a copyrighted work which is in a particular class of works if such persons are … adversely affected by virtue of such prohibition in their ability to make non-infringing uses of that particular class of works'. The Librarian of Congress had the power to make such determinations in the two years after the legislation was passed and has the power in respect of each succeeding 3 year period.

One possible exemption that was considered, particularly related to the database debate. A number of commentators claimed that copyright owners were attaching public domain material to copyright material with minimal, but sufficient copyright originality such as an originally worded introduction. They were then bolting

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37. One possible caveat to this proposition is that while the decision in Feist has applied in theory, some decisions have found the necessary spark of creativity quite easily. *See* Davison, *supra* note 3, at pp. 162-164.
38. The *sui generis* right is not subject to national treatment and hence only those database owners with the necessary connection to the EU or those affected by bilateral agreements with the EU Council have the benefit of the right. *See* Article 11 of the Directive.
39. S. Maurer, 'Across Two Worlds: Database Protection in the US and Europe', paper prepared for Industry Canada's Conference on *Intellectual Property and Innovation in the Knowledge-Based Economy*, Ottawa, 23-24 May 2001, available at <www.strategis.ic.gc.ca>. *See also* Davison, *supra* note 3, at pp. 259-263.
40. Digital Millennium Copyright Act, P.L. No. 105-304, 112 Stat. 2860.
41. S. 1201(a)(1)(A) of the DMCA.

these public domain documents to this minimal copyright material and effectively acquiring protection for non-copyright material.[42] The commentators urged that compilations consisting primarily of materials in the public domain be exempted from the anti-circumvention provisions for the purposes of gaining access to this public domain material.[43]

The Librarian of Congress took the view that the need for such an exemption had not been demonstrated. He also took the view that:

> 'In general, it appears that the advent of access control protections has increased the availability of databases and compilations. Access controls provide an increased incentive for database producers to create and maintain databases. … If a database producer could not control access, it would be difficult to profit from exploitation of the database. Fewer databases would be created, resulting in diminished availability for use'.[44]

In addition, the Librarian took the view that most of the uncopyrighted material could be obtained from other sources.[45] Consequently, no exemption was provided in respect of circumvention for the purposes of obtaining public domain information, information that would be protected in Europe by the *sui generis* right. The effect of this decision, in conjunction with the anti-circumvention provisions, is to substantially increase the protection for databases that qualify for any form of copyright protection and it takes little effort to add sufficient material to a database for it to receive some copyright protection.

On the other hand, once access is obtained, the anti-circumvention provisions would not prevent use of information within a database which would include reproduction of large amounts of information, but not their selection or arrangement. However, while the anti-circumvention provisions would not prevent this, the contract providing for access to the material in the first place may do so. In other words, the contractual terms upon which access is granted could preclude subsequent unauthorized use of the non-copyright information within the database. In effect, there is de facto protection of the 'sweat-of-the–brow' involved in creation of databases in the United States via the combination of its anti-circumvention provisions, contract law and the relative ease of adding a minimal amount of copyright material to a database.[46]

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42. Letter of Professor Jane Ginsburg to US Copyright Office, June 11, 2000 available at: <www.copyright.gov/1201/post-hearing/ginsburg.pdf>. (visited 28 December 2005).
43. Ibid.
44. Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, October 27, 2000, *Federal Register* vol. 65, no. 209, pp. 64555-64574, at p. 64567.
45. Ibid.
46. Some additional protection is provided for 'hot' news via the common law tort of misappropriation that is recognized in the majority of American states. *See*: Davison, *supra* note 3, Chapter 5.

Similar results could have been achieved in the EU with anti-circumvention provisions. Further protection was also already provided in a number of countries via unfair competition laws and, in at least one case in France, those laws have proved to be as effective as the *sui generis* right.[47]

2.2.2. … And Why They do Matter

All this suggests that the creation of the *sui generis* right in the EU has been superfluous and unnecessary. On the other hand, it is also arguable that the existence of the new right has therefore done no harm. There are numerous responses to that argument. Three of them are of particular significance.

The first of these responses is that the introduction of a new right introduces new and increased transaction costs. In addition to copyright and contractual licensing issues, database owners and users must incorporate the *sui generis* right into any of their agreements. Failure to do so can result in significant difficulties, especially if copyright and the *sui generis* right subsist in the same database.[48] Other transaction costs will flow from the uncertainties associated with the interpretation and application of the Directive. For example, while the ECJ has specifically ruled out the 'counting' of investment in creating data as opposed to obtaining, presenting or verifying it as a basis for acquiring the *sui generis* right, the actual application of that principle will be difficult in many circumstances and database owners can be expected to engage in activities designed to differentiate between investment in creating data and investment in presenting and verifying it. Both these issues will lead to increased transaction costs in the form of litigation and re-arrangement of business activities simply for the purpose of acquiring legal rights in relation to data.

Second, there is a more insidious difficulty associated with expanding private intellectual property rights when there is no justification for doing so. One of the greatest and most important aspects of the public domain is the norms of various sections of society relating to the sharing of information. These norms apply in sectors such as government and scientific research institutions. The introduction of new, strong intellectual property rights has a negative impact on these norms. Sharing of information requires not just a capacity to share but an attitudinal propensity to do so. The commodification of information via the introduction of property rights actively introduces a mindset of commercialism, a new norm that destroys cooperation and invites the development of an anti-commons and a tragedy of that

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47. *See*: *Groupe Moniteur v. Observatoire des Marches Public*, Cour d'appel de Paris 18 June, 1999, 183 *RIDA* 316 (2000), where the court found for the plaintiff who objected to the copying of his advertisements on the grounds of unfair competition even though the court decided that there had not been sufficient investment in the compilation of the advertisements to attract the protection of the sui generis right.
48. *See*: Davison, *supra* note 3, Chapter 4.

anti-commons. It is this aspect of the debate that appears to concern international scientific organizations.[49]

Finally, on a related point, one must ask the question as to where the onus lies when it comes to creating and maintaining private property rights that are carved out from the public domain.[50] The introduction of the *sui generis* right involved a privatization of part of the public domain without any payment being made to government in return for that privatization. In the absence of a clear basis for such a right, it appears that the onus was on supporters of the public domain to justify the retention of a part of the public domain rather than on those seeking private rights in return for no payment to justify the grant of those rights. This situation seems to reflect a view that if some commodification is good, then more commodification is better. If that is the case, then the battle of ideas has been lost, at least for the time being, and some effort needs to be put back into that battle.

3. LESSONS FROM THE EU AND AMERICAN PROCESSES

There are many lessons to be learned from the different outcomes in the EU and the United States. For example, why has the US not simply followed the EU? The uniformity of outcomes in the EU and the United States, while there have been such vast differences in approach to the legal protection of databases, demonstrates several things. First, they give the lie to the suggestion put forward by some economists that economics will dictate the legal outcome of a particular issue. The suggestion that some particular legislative result such as the granting of exclusive property rights is economically inevitable is simply not true.

Second, the different processes reveal the extent of rent seeking by intellectual property owners and the potential for that rent seeking to distort law reform in the area. The key difference between the United States and Europe is that user groups have been able to resist this rent seeking because the opponents of *sui generis* protection have been vastly more organized in the United States than they were in Europe. A variety of US lobby groups such as the American National Research Council, which has published two books on the issue[51] and various scientific academies, Universities and libraries have been extremely well organized and have heavily lobbied members of Congress. In contrast, in Europe there was no pan-European scientific lobbying organization[52] or effective pan-European voice for libraries.

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49. *See* e.g. the submissions of the WMO and UNESCO to WIPO in relation to moves for a database treaty discussed in Davison, *supra* note 3, Chapter 6.
50. This is particularly the case with intellectual property where there are no static efficiency issues arising from the lack of rights and the only issues relate to dynamic efficiency issues.
51. American National Research Council, *Bits of Power: Issues in Global Access to Scientific Data*, Washington, National Research Council, 1997; American National Research Council, *A Question of Balance: Private Rights and the Public Interest in Scientific and Technical Databases*, Washington, National Research Council, 1999.
52. The International Council of Science (ICSU) made some submissions but they probably lacked some force due to the lack of a pan-European Union scientific voice.

When the drafting of the Directive shifted from unfair competition principles to an approach based on exclusive rights, almost overnight, probably in response to the well-organized submissions of publisher organizations, such as the Federation of European Publishers, there was no effective, organized opposition to the new proposal. The message appears to be that there needs to be effective lobby groups that are co-extensive with the particular jurisdiction of the legislating body. Hence, in the United States, members of Congress have not just considered the merits of the various arguments; they also have been under no illusions as to the possible electoral consequences of any action they may take because they were dealing with American lobby groups.

The effect of a lack of organisation among user groups in the European Union is that they are now 'stuck' with the Directive. The prospects of repealing the Directive are almost nil, but there are some aspects of the Directive that could surely be addressed, even if the political process will make that difficult. Some of the issues that may be addressed in a review of the Directive are mentioned below.

3.1. Eliminating References to 'Qualitative' Investment in and 'Qualitatively' Substantial Parts of Databases

There does not appear to be any justification for maintaining the reference to qualitatively substantial parts of a database in the test of infringement or indeed the test for determining whether a database qualifies for protection. If the qualitative investment relates to the selection or arrangement of data, then the investment is protected by copyright. If not, it relates to the 'quality' of the information and necessarily foreshadows the protection of small amounts of valuable information when the supposed justification for the Directive is to augment copyright protection by protecting the sweat of the brow involved in creating and maintaining databases rather than protecting the information itself.[53]

3.2. Ensuring Maximum and Uniform Implementation of Exceptions

Even the very limited exceptions that are provided for in the Directive are not mandatory. Nations seem to have picked optional changes that reduced users' entitlements, but not picked optional changes that increased them. For example, the UK limited the scope of its existing copyright defense of fair dealing for research in respect of databases, but did not introduce a permissible new defense of private copying of hard copy databases. Given that the exceptions are extremely limited, a mandatory

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53. Paragraph 46 of the preamble to the Directive provides that 'the existence of [the database] right … should not give rise to the creation of a new right in the works, data or materials themselves.' The latest American proposal is restricted to a taking of quantitatively substantial part.

imposition of the exceptions would be appropriate. It is also unfathomable that there is no exception for the purpose of news reporting. Such an exception should be introduced into the Directive.

3.3. COPYRIGHT EXEMPTION FOR DOWNLOADING DATA

At the moment, the *sui generis* right in a database may expire after fifteen years, but if that same database enjoys copyright protection, the copyright in it will survive for the life of its author plus seventy years. In order to make the distinction between the periods of protection meaningful, a further exception to copyright would be needed that would permit a user to make a temporary copy for the purposes of extracting and re-utilizing information in a way that does not infringe the copyright in the selection and arrangement of the information. For example, the information could be downloaded and then re-arranged or selections made from it so that the final arrangement or selection does not infringe the database owner's copyright. In the absence of such an exception, the expiry of the *sui generis* right would not result in information contained within original databases being available, as taking the information in the easiest form (electronic downloading) would infringe the copyright.

3.4. ALTERING THE PROVISIONS IN RESPECT OF THE DURATION OF PROTECTION TO ENSURE DATA FALLS INTO THE PUBLIC DOMAIN AFTER 15 YEARS

The point was made above that the actual period of protection for all of the data in a database may be perpetual. The database owner merely has to make a substantial investment in updating or re-verifying the database for the period of protection for all data in the database to start again. As also indicated above, the 1999 American proposals provided that individual datum would fall into the public domain at the end of 15 years, regardless of whether the database has been updated. The latest proposals provide that data would fall into the public domain once it has lost its time sensitivity. The difference between the Directive and the American proposals is very significant, especially in the context of electronic databases where the 'original' database will cease to exist and, under the Directive, the only available version will be one that is fully protected. This issue is discussed further below in the context of the notion and the role of the public domain.

As indicated, I think that politically, it will be difficult to achieve the above changes to the Directive but it may be easier to gain some victories for the public domain by skirting around the Directive and addressing related legal and practical issues. While the *sui generis* right is a very powerful legal right, the greatest power that database owners have flows from their market power in being able to control significant volumes of information and incorporate them into their databases. There are two particular responses to this situation that need to be considered.

3.5. APPLICATION OF ANTITRUST GENERALLY

The case law concerning the *sui generis* right demonstrates the need for a careful application of antitrust principles and laws to database owners. The fact that many of the cases relate to synthetic information, such as telephone directories, that is exclusively within the database owner's control suggests that many database owners possess a significant amount of market power. Consequently, the key to controlling any abuse of intellectual property rights may be the enforcement of antitrust provisions rather than any alterations to the intellectual property laws. In this regard, it may be appropriate to reverse the onus of proof and require database owners to demonstrate that either they do not possess substantial market power or that their enforcement of their intellectual property rights by, for example, refusing to license their data, does not constitute an abuse of any such power.[54]

An alternative to that approach but one also based on market power considerations is the further development of collective bargaining, whereby user groups band together to jointly negotiate user licenses on terms that are most favorable to users. This should be increasingly possible in a digitized environment where the geographical location of users is less relevant. Hence, there is no reason why libraries in different locations cannot jointly negotiate licenses for use of on-line databases. By working together and cooperating, users can generate a degree of monopsony power to counter-balance the monopoly power of owners.

The development of that cooperation may have further legal implications. It may be that user groups will need specific exemption from antitrust legislation that permits the type of collective bargaining mentioned here. In this context, any evidence of detrimental consequences of the Directive and the new database right may be of some use. While it is inconceivable that the Directive will be repealed, it might be possible to argue that its effects justify the sort of exemptions for users from anti-trust law mentioned here. As EU anti-trust law is not my specialty, I will take that matter no further.

3.6. RIGHTS OVER THE CONTENTS OF DATABASES

The other way around the database right is for users to have a greater appreciation of the extent to which they are also contributors to the contents of databases. In particular, universities are increasingly addressing the reality that their employees are paid to create the very research information that is contained within databases. Those employees often pay for the privilege of having that information published in databases and universities then pay so that their employees may gain access to those databases in order for them to continue their research. The obvious solution

54. This point was raised in the submission of the Australian Consumer and Competition Commission to the Australian Attorney-General's Department on the protection of databases. Unpublished, a copy is held on file by the author.

to this problem is for universities and other research institutions to capture the value of the intellectual property generated by their own employees.

4. NOTION AND ROLE OF THE PUBLIC DOMAIN IN THE CONTEXT OF INFORMATION LAW AND POLICY

The background paper asks that contributors consider the notion and role of the public domain. For example, it asks us 'Should information policies be aimed at maximizing the public domain or optimizing information flows?'. This question almost, but does not quite, answer itself. The public domain is not an end in itself. No great benefit is derived from congratulating ourselves on building or maintaining a public domain unless that public domain results in optimizing information flows. The idolization and unthinking adoption and defense of a particular position are dangerous and unhelpful. Fair use fanatics may be as dangerous as commodification commandos or, dare I say it, TRIPS terrorists, as it is the interplay and interface between the public domain and private intellectual property rights that is critical in creating an optimal information flow. The relationship between the public domain and private property rights should not be so much one of balance in which competing and opposing concepts are at work but one in which balance is achieved by the mix of and between the public domain and private rights so that they complement each other to maximize information flow. For that reason, I suggest we avoid purist definitions of the public domain that focus on a complete absence of property rights even though such definitions may be ontologically accurate. Instead, I suggest a more teleological approach that focuses in a holistic manner on the mix of property rights, restrictions on those rights and, where appropriate, the existence of a right to access privately owned information in a non-exclusionary manner such as via compulsory licenses.

I said above that the question asked in the background paper almost answers itself. I say 'almost' because while optimizing information flows may be the primary objective, a vociferous defense of the public domain for its own sake may be one means of achieving it. The main difficulty with the current debate about the public domain versus commodification and the consequent and incessant references to 'balance' is that the resources of commodification commandos are infinitely greater than those of the fair use fanatics that advocate for the public domain. The advocates of commodification are motivated by financial gain and, while they may passionately believe in optimizing information flows, their financial commitment to a particular, private property based model by which to achieve it necessarily distorts the debate. They stand unconditionally on one side of the debate and 'unbalance' it by vociferously demanding more than what they need and taking everything that they can get. The willingness of the publishing industry to accede to the watered down 1999 and 2003 American proposals for legislation on collections of information[55] and the manner

55. *See* Davison, *supra* note 3, at pp. 201-210.

in which the Directive was transformed from its initial First Draft with an emphasis on unfair competition to a full blown property right are examples of the industry's standard technique of overstating its case and taking everything that it can get via the political process.[56] There are several possible responses to that reality.

4.1. OPEN WARFARE

One is for others to take an unequally uncompromising attitude to the defense of the public domain and resist any further expansion of intellectual property rights with the same doggedness with which commodification commandos pursue that expansion. The American legislative gridlock on database legislation is an example of how public domain advocates have, at least temporarily, evened up the balance. The cost in resources on both sides has been significant. The other difficulty with this scenario is that, in the end, the 'balance' may well tip in favor of the lobby group with the greater resources and the greater determination.[57]

4.1.1. Symbolism and the Battle of Ideas

A related but possibly superior response may well be one in which the advocates for the public domain pro-actively seek to wind back some of the extensions of intellectual property rights that have occurred over the last few decades. A major part of the problem with commodification is that the battle of ideas in relation to commodification has clearly been lost by public domain advocates over the last couple of decades. The purpose of doing so would be to demonstrate that in a 'balanced' intellectual property scheme, the balance between public and private rights may well change over time but there is no reason why it should inexorably shift towards private rights and never shift back towards public rights.

In this regard, a leaf may be taken out of the book of some environmentalists. In 1972, the island state of Australia, called Tasmania, flooded Lake Pedder. It did so in order to generate hydro electricity. Undoubtedly, if Lake Pedder had not been flooded, it would now be recognized as a World Heritage area. Today, Tasmania

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56. The extent to which copyright industries will engage in rent seeking via legislative concessions has almost no limit. For example, a recent report recommending an extension of the copyright term in Australia suggested that increasing the term would reduce rent seeking costs as 'term extension would likely reduce future rent seeking costs'. In other words, capitulation to the demands of the copyright industry would save the expense of having to be subjected to those demands until they are met. *See* Copyright Term Extension: Australian Benefits and Costs (A report written by the Allen Consulting Group available at www.allenconsult.com.au at § 4.4.) So it now seems that rent seeking is a reason to increase intellectual property rights in the face of more traditional analyses that suggest that rent seeking is actually a reason for resisting the claims of well resourced lobbyists for favorable legislative treatment.
57. For a more detailed discussion of this issue, *see* P. Drahos and J. Braithwaite, *Information Feudalism,* London, Earthscan, 2002 at p. 14 where he notes, for example, that the pharmaceutical industry in the United States has one lobbyist for every two Congressional representatives.

has far more hydro electricity than it needs. But Lake Pedder is still flooded. The damage done by expanding the hydro electricity industry is considerable, although the empirical evidence suggests that no gains were made in return for the damage. Some environmentalists have suggested a radical move. They have suggested that Lake Pedder be restored to its former glory by draining Lake Pedder. They have suggested this move because they believe the environmental cause can be best advanced by demonstrating the value of reversing environmental damage, conscious that the environmental lobby faces the difficulty that environmental damage is rarely, if ever, reversed. The intention of the environmental lobby is to generate an example of a reversal of environmental damage that will stand out throughout the world as a statement on environmental issues and the need to redress the balance between development and environmental concerns.

A similar problem exists with the expansion of intellectual property. User groups may attempt to resist the expansion of intellectual property, but if they are unsuccessful that expansion and the new intellectual property regimes created via that expansion stay in place forever. Intellectual property owners then move on to the next campaign to increase intellectual property rights. Users are therefore put in the position of constantly attempting to resist the expansion of intellectual property. Those attempts may be successful for relatively short periods of time but, in the end, vested interests usually win. Public domain advocates need to pursue a reversal of intellectual property rights where that is appropriate. We need to drain Lake Pedder so that the message will go out that the 'balance' of intellectual property rights can be redressed in favor of users, if that is appropriate. So what is the Lake Pedder of intellectual property law?

In the context of the Directive, I suggest that the target of such a campaign should be the duration of the database right and its protection for qualitatively substantial parts of a database. In particular, we should attack the suggestion that individual items of data may be protected indefinitely if the database owner makes a substantial investment in updating the database. There are several reasons for choosing this particular aspect of the law. For example, it confers the greatest possible period of protection on the least creative element of intellectual property. There is no conceivable justification for conferring perpetual exclusive property rights in respect of the collection, presentation or verification of information. The very justification for the Directive itself demonstrates the absurdity of the proposition that the period of protection, could conceivably be perpetual[58] and American proposals on this topic acknowledge the need to ensure that individual items of information in a database will fall into the public domain in due course.[59] If such a campaign were coupled with an acknowledgment of the validity of intellectual property in

58. E.g. Recital 40 of the Directive provides that 'the object of this sui generis right is to ensure protection of any investment in obtaining, verifying or presenting the contents of a database for the limited duration of the right…'.
59. The 1999 proposals provided for them to fall into the public domain after 15 years and the current proposal provides a more discretionary arrangement whereby they fall into the public domain after they cease to be time sensitive.

appropriate circumstances[60], the concept of 'balance' may in fact be re-introduced into the intellectual property debate.

The possibility that such campaigns may be effective is demonstrated by some of the gains achieved by user groups in the recent interpretation and application of TRIPS. The moves surrounding intellectual property rights over HIV drug treatment is a clear example how the combination of publicity and proper analysis of intellectual property issues can achieve some changes or at least amelioration of the relentless enforcement of intellectual property rights.[61] Other examples of publicly supported movements that can effect practical changes in the operation of intellectual property rights include the Creative Commons movement.

4.1.2. Independent Watchdogs

An alternative or additional approach is for governments to ensure that they have independent advice on moves on intellectual property. The cost of obtaining that advice is relatively cheap and, in comparison with the costs of inappropriate expansion of intellectual property rights, extremely cheap. Such an approach should be coupled with a conservative view from government that appreciates the costs of rent seeking and firmly places the onus to prove the value of expanding private property rights upon those demanding that they be given such rights. In Australia, that independence has, to some extent, come from the Australian Competition and Consumer Commission and its recently departed Chair, Professor Allan Fels. He ran a campaign for over a decade against Australia's restrictions on the parallel importation of copyright material which eventually resulted in the elimination of those restrictions in respect of most copyright material. The effect of the legislative changes has been a dramatic reduction in the cost of such copyright material to Australian consumers and, despite dire predictions from the copyright industry, the sky has not yet fallen. A small indication of the vehemence with which his stance was opposed is the fact that some publishers subsequently refused to publish a biography of him despite their commissioning editors regarding the biography as very commercially viable. Such independent, publicly funded bodies and individuals are an integral part of creating and preserving the balance that is so often spoken about, but so often jeopardized by the imbalance in resources between commodification commandos and fair use fanatics.

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60. I would suggest for example, that 'balanced' public domain advocates would agree with the demise of Napster in its original incarnation but the preservation of the technology that facilitated it which is in fact the result of the copyright litigation concerning Napster. I would also suggest that some protection for sweat of the brow is appropriate and very few opponents of the Directive and American proposals on this topic have stated otherwise.
61. *See* for example: Drahos and Braithwaite, *supra* note 57, at pp. 5-10, concerning South African litigation on the issue and the Doha Declaration on the TRIPS Agreement and Public Health WT/MIN(01)/Dec/2 20th November, 2001.

5. CONCLUSION

In summary, the dynamic maintenance of an appropriate balance between the public domain and private property rights requires a multi-faceted approach involving the following:

1. Political organization of user groups on a permanent basis to monitor developments in intellectual property and ensure that public domain perspectives are taken into account.
2. Such organizations need to take a pro-active stance on intellectual property issues so as to shape the intellectual property agenda rather than merely respond to the expansionist agenda of intellectual property owners.
3. There needs to be a continuing 'battle of ideas' so that the backdrop to consideration of intellectual property ideas is 'balanced' or neutral rather than one that readily and too easily accommodates expansion of private property rights.

Governments need to be prepared to invest in independent advice in relation to intellectual property rights issues so as to counterbalance the considerable economic interests of intellectual property owners. Such advice needs to come from government agencies that do not necessarily deal exclusively with intellectual property matters, but instead deal with broader issues such as economic policy and the impact of issues such as intellectual property on the economy and society at large.

POSTSCRIPT

On 12 December, 2005, the Directorate General for the Internal Market and Services released a Working Paper entitled 'First evaluation of Directive 96/9/EC on the legal protection of databases'. The primary finding in the Working Paper at 1.4 is that:

> The economic impact of the 'sui generis' right on database production is unproven. Introduced to stimulate the production of databases in Europe, the new instrument has had no proven impact on the production of databases.

In the light of this finding, the Working Paper goes on to identify four possible options at 6.1-6.4. They are:

1. Repeal the whole Directive and allow individual members to return to the position of protecting databases via their own form of copyright and/or unfair competition laws.
2. Withdraw the 'sui generis' right and rely on the harmonisation of the originality standard for copyright within the Directive.
3. Amend the 'sui generis' provisions. The nature of the proposed amendments is not made clear. Various options are canvassed such as effectively overruling

the ECJ decisions by introducing a reformulation of the 'sui generis' right to also 'cover instances where the 'creation' of data takes place concurrently with the collection and screening of it'. Other possibilities include clarifying what is a substantial investment for the purposes of the 'sui generis' right.

4. Maintaining the status quo, especially in the light of the ECJ decisions which limit the scope of the 'sui generis' right.

The Working Paper identifies difficulties with all of these options and has invited stakeholders to submit their observations on the Working Paper's conclusions and options by 12 March, 2006. Space does not permit an analysis here of the various options although the Working Paper's point that all of the options have their drawbacks indicates the difficulties that can flow from a hasty and inappropriate expansion of intellectual property rights.

If the Working Paper's fundamental premise is correct and the Directive has had no impact on the production of databases in the EU, the introduction of the Directive has been a monumental blunder. Above all, the Working Paper demonstrates the need for extreme caution in introducing new intellectual property rights and to counteract the rent seeking submissions and lobbying of interest groups. It also demonstrates the need for careful, independent review of proposals for such rights. While 'fixing' the problems generated by the Directive will be a very difficult task, the easy lesson to be learned for the future relates to proposals for new rights. Whether governments will learn that lesson remains to be seen.

Chapter IX

Patenting Science: Protecting the Domain of Accessible Knowledge

Graeme B. Dinwoodie and Rochelle Cooper Dreyfuss

For the most part, the contributions to this volume examine commodification as it applies to cultural products. In this chapter, we look at the effect of commodification on scientific and technological activity. Differences between cultural and scientific production and within the intellectual property laws applicable to these enterprises alter the debate on the relationship between commodification and what (for reasons set out below) we prefer to call the 'domain of accessible knowledge.' Some issues are less contentious in the context of technological production while others take on new dimensions. Furthermore, the role that patents play in the organization of scientific research and the nature of international obligations applicable to patenting combine to impose significant constraints on the strategies available to those who would expand public access at the inventive frontier.

This chapter proceeds as follows: after discussing the nature of the commodification debate and the constraints unique to scientific and technological production, we explore ways in which the domain of accessible knowledge could be reconstituted. In our discussion of these strategies, we draw on previous work in which we analyzed various substantive methods for curbing perceived encroachments on the public domain to see how each would fare if challenged under the TRIPS Agreement;[1]

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1. Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakech Agreement Establishing the World Trade Organization, Annex 1C, Legal Instruments–Results of the Uruguay Round, vol. 31, 33 I.L.M. 81 (1994) [hereinafter TRIPS Agreement]. *See* G.B. Dinwoodie and R. Cooper Dreyfuss, 'WTO Dispute Resolution and the Preservation of the Public Domain of Science under International Law', in K.E. Maskus & J. H. Reichman (eds.), *International Public Goods and Transfer of Technology under a Globalized Intellectual Property Regime*, Cambridge (Mass.) Cambridge U. Press (forthcoming 2005); G.B. Dinwoodie and R. Cooper Dreyfuss, 'International Intellectual Property Law and the Public Domain of Science', 7 *Journal of International Economic Law* 431-448 (2004) [hereinafter JIEL]. The approaches were excluding certain fields or subfields from the subject matter eligible for patent protection;

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 191–221

we then investigated the relationship between the dynamics of domestic legislative procedures and TRIPS dispute resolution outcomes.[2] In this piece, we continue our examination of the domestic efficacy and TRIPS compatibility of substantive alterations to the patent system: strengthening the non-obviousness (inventive step) requirement; narrowing the scope of patent claims; and recognizing new occasions in which the government may use patented inventions without authorization (but with payment).

As in our other pieces, our purpose is not to predict the outcome of future disputes – there are far too few WTO precedents for that. Rather, our goal is to explore how the interpretive approaches pursued at the international level affect the ability of TRIPS members to keep their laws attuned to the developments and needs of science. Taking our four articles together, we argue that under certain interpretations of TRIPS, a variety of prophylactic substantive steps to protect the domain of accessible scientific knowledge could be taken, that each has a different pay-off as a matter of domestic policy, but that there is little relationship between the strength of the obstacle posed by TRIPS and the impact of the approach on innovation. Furthermore, we see reason to worry that the analytical tools utilized to date carry a strong potential for altering the political economies of member states in ways that create a one-way ratchet in favor of increased commodification.

We conclude that a map of the public domain of the type charted by Pamela Samuelson must do more than consider the effects of various domestic laws and policies because the international system (as currently administered) shapes the legal landscape on which individual nations are operating.[3] To alter that landscape, patent strategists should consider a variety of approaches. But we suggest that it may be particularly fruitful to adapt the rhetoric of scholars seeking to promote the public domain in domestic copyright law. The differences we see in the commodification debate may not, after all, reflect genuine differences between cultural and technological production. Rather, it may be that copyright scholars better appreciate the value in framing the public's interest as a right to access.

1. THE NATURE OF THE DEBATE

As noted above, the debate on commodification and the public domain is largely shaped by copyright scholarship. In that literature, there is general agreement that the public domain is shrinking. To a large extent, the arguments center on what

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recognizing a new experimental use (or fair use) defense to infringement; and curbing the right to seek relief from those who agree to make the fruits of their own work publicly available.

2. G.B. Dinwoodie and R.C. Dreyfuss, 'TRIPS and the Dynamics of Intellectual Property Lawmaking', 36 *Case Western Reserve Journal of International Law* 95-122 (2004) [hereinafter referred to as 'CWRU'].

3. P. Samuelson, 'Mapping the Digital Public Domain: Threats and Opportunities', 66 *Law & Contemp. Probs.* 147-171 (2003); and P. Samuelson, 'Challenges in Mapping the Public Domain', elsewhere in this volume.

should be counted as within the public domain and whether access to it matters. On the patent side, the situation appears somewhat different. There is little debate on what counts as public, nor is the claim of a need for access contested. Rather, the discussion focuses on whether the domain of public knowledge is actually shrinking, and – since there are significant constraints imposed on would-be reformers – considerable controversy on what could be done to reverse the trend.

1.1. WHAT COUNTS AS PUBLIC?

As Pamela Samuelson's contribution demonstrates, charting a public domain map is not easy in copyright because there is little consensus on whether material subject to expired copyrights, uncopyrightable material, and information available through the fair use or other defenses to infringement are equally entitled to be considered part of the public domain. For patent lawyers, the need to make this distinction is almost incomprehensible. The quid pro quo for receiving a patent – indeed, one of the core goals of patent law – is disclosure.[4] The same document that reserves rights in a new technology also reveals that new information to the public. While some of the material revealed will be subject to claims of exclusivity, the essence of the patent trade-off is that not all of that information is privatized. Underlying principles of nature disclosed in the patent have traditionally become available for immediate use. So do any applications of these principles that the patentee revealed but failed to 'distinctly' claim.[5]

Of course, one could certainly quibble about whether unauthorized use of patented material that is subject to a defense against infringement is in or out of the public domain. There are, however, few such defenses. Post-TRIPS, most defenses are designed to deter bad conduct by the patentee (such as bad faith dealings with the patent office or anticompetitive use of the patent). Defenses to protect the public's interests are almost nonexistent.[6] To be sure, there is an experimental use defense

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4. *See*, e.g., *Eldred v. Ashcroft*, 537 US. 186, 190 (2003). We mainly draw our examples from US law. Partly, this is a matter of convenience, partly because the problems we later describe appear to be more acute in the United States right now, but may be harbingers and provocateurs of similar developments elsewhere.

   In US patent law, the duality of claiming and disclosing is captured in a single provision of the Patent Act, 35 U.S.C. § 112. This provision requires that the inventor 'point[ ] out and distinctly claim[ ] the subject matter which the applicant regards as his invention.' It also requires the patentee to provide 'a written description of the invention and of the manner and process of making and using it, in such full, clear, concise, and exact terms to enable any person skilled in the art to … make and use the same…' Patentees must also disclose their subjective views of the best mode for practicing their inventions. Disclosure is also mandated by the TRIPS Agreement. *See* Art. 29.
5. 35 U.S.C. § 112.
6. TRIPS, for example, bars general compulsory licensing provisions, Art. 31, or local working requirements, Art. 27.

that could ensure access.[7] But it is increasingly seen as there only to permit the public to test the validity of the patent (for example, to verify its claimed utility) – that is, to make sure that the advance was appropriately privatized in the first place.[8]

With disclosure considered so integral to the patenting system, it is no wonder that there is little quarrel over finer distinctions. What matters is whether the information a second comer needs is available for use – whether it is in a domain that might be called 'the domain of accessible knowledge.'

1.2. DOES ACCESS MATTER?

Several of the pieces in this Volume and elsewhere put forward theories for why access is important. This is a difficult issue in copyright law because only copying gives rise to claims of infringement. Thus, it could be argued that cultural progress does not require utilization of protected material, a position that would allow the law to safely ignore public access issues.

Theorists offer many reasons to believe, as Jessica Litman put it, that '[t]he public domain should be understood not as the realm of material that is undeserving of protection, but as a device that permits the rest of the system to work by leaving the raw material of authorship available for authors to use.'[9] Richard Posner and William Landes emphasize economic aspects, arguing that optimal production cannot occur if the cost of inputs exceeds the profits obtainable from outputs; to keep costs in line, some access to protected works is necessary.[10] Wendy Gordon stresses market failure problems and has also argued that works 'themselves become facts with which their audiences have to deal.'[11] Pamela Samuleson and Suzanne Scotchmer consider access in the context of interoperability.[12] In Julie Cohen's contribution to this Volume, she explores the sociology of creativity and the constitution of culture; Michael Birnhack's Chapter deals with access as an aspect of fundamental human rights. Whether it is necessary, or desirable, to find a 'true' theory is difficult to

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7. *See*, e.g., 35 U.S.C. § 271(e) (permitting experimentation on patented drugs 'solely for uses reasonably related to the development and submission of information under a Federal law which regulates the manufacture, use or sale of drugs'); William C. Robinson, *The Law of Patents for Useful Inventions*, Little, Brown and Company (1819), Boston 1890, § 898; *Whittemore v. Cutter*, 29 F. Cas. 1120 (C.C.D. Mass. 1813); *Sawin v. Guild*, 21 Fed. Cas. 554, F. Cas. No. 12391 (C.C.D. Mass. 1813) (permitting experimentation to gratify 'scientific tastes').
8. *See*, e.g., K. Strandburg. 'What Does the Public Get? Experimental Use and the Patent Bargain', 2004 *Wis. L. Rev.* 81-152 (2004), at p. 89.
9. J. Litman, 'The Public Domain', 39 *Emory L.J.* 965-1023 (1990), p. 968.
10. W.M. Landes and R.A. Posner, 'An Economic Analysis of Copyright Law', 18 *Journal Legal Studies* 325-33, 344-53 (1989), pp. 332-333.
11. W.J. Gordon, 'Fair Use as Market Failure: A Structural And Economic Analysis of the Betamax Case and its Predecessors', 82 *Columbia L. Rev.* 1600-1657 (1982); W.J. Gordon, 'Reality As Artifact: From Feist To Fair Use', 55 *Law & Contemp. Probls.* 93-102 (1992), p. 96.
12. P. Samuelson and S. Scotchmer, 'The Law and Economics of Reverse Engineering', 111 *Yale L.J.* 1575-1663 (2002), pp. 1612-1637.

say; it is sufficient to note that the different theories are likely to create different prescriptions for protecting access interests.

On the patent side, there is virtually no debate of this nature. To be sure, there is more than one way to think about access. There is a substantial literature on the distributive consequences of patenting, particularly as applied to pharmaceutical products.[13] However, the core value in access is undisputedly seen as utilitarian, stemming from a shared and unquestioned understanding that knowledge in science is cumulative – that access is integral to progress. Numerous examples of progress-through-access have been demonstrated by historians of science and epistemologists. A recent example is Peter Galison's book on the theory of relativity, which provides new insights into the relationship between Einstein's theories and his work in the Swiss patent office examining applications on inventions related to the synchronization of railway clocks.[14]

The crucial importance of access to prior knowledge is also readily admitted by scientists. Thus, Newton famously wrote to Robert Hooke 'If I have seen further [than certain other men] it is by standing upon the shoulders of giants.'[15] Scientists' own understanding can also be perceived in the Mertonian norms of communal-

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13. For example, patents on pharmaceuticals raise difficult questions on who may benefit from the fruits of society's investment in medical research: questions on the terms on which essential medicines are made accessible to citizens of less developed countries; on ways to assure that all developed countries pay a fair share of the costs of medical research; and on whether it is appropriate for the patent system to require taxpayers to make transfer payments to those whose inventions were made with government support. *See*, e.g., G. Harris, 'Price of AIDS Drug Intensifies Debate On Legal Imports', *New York Times*, April 14, 2004, Sec. A, p.1, col. 1 (describing the pricing of Norvir, an AIDS drug, in the United States and Europe); S. Ghosh, 'Pills, Patents, and Power: State Creation of Gray Markets as a Limit on Patent Rights', 53 *Fla. L Rev.* 789-829 (2001); Note, S. Shoell, 'Why Can't the Poor Access Lifesaving Medicines? An Exploration of Solving the Patent Issue', 4 *Minnesota Intell. Prop. Rev.* 151-182 (2002); M.T. Griffin, 'AIDs Drugs and the Pharmaceutical Industry: A Need for Reform', 17 *Am. J. L. and Med.* 363-410 (1991).
14. P. Galison, *Einstein's Clocks, Poincaré's Maps: Empires of Time*, New York, Norton, 2003. In his contribution, Eli Salzberger suggests that Thomas Kuhn's theory of revolutions within science is inconsistent with this claim. While it may well be true that there are paradigm shifts in scientific thinking, these shifts occur when enough facts accumulate to make old theories untenable. Since the continuing viability of a theory cannot be verified without the right to use accumulated facts and test them against the theory, access is clearly important even to revolutionary science. Admittedly, Kuhn states that revolutionary science is inconsistent with 'cumulative development,' but what he seems to mean is that science proceeds discontinuously and nonlinearly, *see* T. Kuhn, *The Structure of Scientific Revolutions*, 3rd ed., Chicago, University of Chicago Press, 1996, p. 108. In many places throughout his book, Kuhn discusses the use of known facts to discard old theories and develop new ones. Access is also important to the acceptance of new paradigms. For example, Einstein's theory of relativity was (relatively) quickly accepted because his physics reduces to Newtonian mechanics for slow moving bodies, *see*, e.g., H.R. Pagels, *The Cosmic Code,* New York, Simon & Schuster, 1982.
15. The Columbia World of Quotations No. 41418 (1996) (quoting Isaac Newton's Feb. 5, 1675 letter to Robert Hooke).

ism, universalism, disinterestedness, originality, and skepticism,[16] which create an environment of open science where new work is shared and refined – and, indeed, regarded by scientists as refined because it is shared through, for example, funding and publication processes dependent on peer review.

Patent law reflects the same perspective. Inventiveness (non-obviousness) is measured by comparing an invention to the knowledge that preceded it.[17] As Robert Merges has argued, the main work of this requirement and the novelty requirement, which bar patents on work that is already known, used, or described in the literature (including, significantly, the patent literature), is to force inventors to consult the prior art – that is, to do library research before they conduct bench research.[18] Indeed, the law can be understood as going further – as taking the position that duplicating work is contrary to public policy. Thus, there are features of patent law that are designed to ensure that inventors patent their work quickly, and to punish them if their delay leads others to waste laboratory resources on rediscovery.[19]

With little disagreement on the need for access, the trick in patent law is to create the right level of access, given that patent rights (unlike copyrights) allow the patentee to exclude everyone – including independent inventors – from practicing claimed inventions.[20] As the discussion on the public domain demonstrated, patent law's disclosure rules are intended to make sure that science can progress despite patenting; the issue is whether there is a commodification movement on the patent side that is rendering existing provisions less effective.

1.3. Is the Domain of Accessible Knowledge Shrinking?

On this issue, the shoe is on the other foot. Thus, recent changes in copyright-related law, such as legal protections for technological measures,[21] expansions of the categories of protectable subject matter,[22] extensions of rights to new participants in

16. *See*, e.g., R.K. Merton, *The Normative Structure of Science, in The Sociology of Science: Theoretical and Empirical Investigations*, Chicago, University of Chicago Press, 1973, pp. 267, 273.
17. *See* 35 U.S.C. §§ 103 (non-obviousness) and 102(a) (novelty).
18. R.P. Merges and J.F. Duffy, 3rd ed., New York, Matthew Bender and Co. 2002, pp. 419-21.
19. *See*, e.g., 35 U.S.C. § 102(b) (setting up a bar to patenting an invention exploited by the patentee for more than a year before the application date); § 102 (g) (awarding priority to the first to conceive, unless that person delayed to the point where a second comer entered the race and reduced to practice first). For an interesting discussion of the relationship between priority and access within science, *see* R.K. Merton, 'Priorities in Scientific Discovery: A Chapter in the Sociology of Science', 22 *Am. Sociological Rev.* 635 (1957).
20. 35 U.S.C. § 271(a). There is a limited 'prior user right' to protect usages that predated the patent, § 273(b).
21. 17 U.S.C. §§ 1201-1202.
22. *See*, e.g., rights to sound recordings, 17 U.S.C. § 102(a)(7), and architecture, 17 U.S.C. § 102(a)(8). The Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, Official Journal L 077, 27/03/1996, pp. 20-28 is another example.

the creative enterprise,[23] enlargements on the scope of protection,[24] lengthening of the copyright term,[25] and recognition of new forms of self-help,[26] make it clear that commodification is proceeding apace in the cultural dimension. The same clarity does not quite exist for patenting. While concern has recently been expressed in several quarters that changes in patent policy are beginning to interfere with open science,[27] the evidence is decidedly mixed.[28]

As an empirical matter, it is certainly true that the number of patents has been rising substantially each year[29] and that increasing numbers of lawyers are entering into intellectual property practices.[30] Thus, it cannot be debated that there is an unprecedented amount of information that is now subject to exclusive rights. What can be questioned, however, is whether this means that there is a decrease in the amount of publicly accessible knowledge.

Increased patenting could be explained in two ways. One is that the innovation environment is becoming more robust and producing more inventions entitled to patent protection. The other is that patents are replacing trade secrets as the major strategy for internalizing the gains associated with technological advances. In either case, the

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23. For example, in 1994, the United States granted rights to the performers of live musical works, 17 U.S.C § 1101. Such rights might be characterized as neighboring or related rights, which have traditionally been protected under other national laws. However, TRIPS Art. 14 required the grant of such rights as a matter of international law.
24. *See*, e.g., the expansion of rights in sound recordings, 17 U.S.C. § 106(6).
25. *See*, e.g., 17 U.S.C. § 302. *See also Luke's Music Library Inc. v. Ashcroft* (DDC 6/10/04) (upholding the constitutionality of a provision that restores copyright protection for works that already became part of the public domain in the United States under 17 U.S.C. § 514).
26. *See*, e.g., R. Cooper Dreyfuss, 'Do You Want to Know a Trade Secret? Licensing Under Article 2B of the Uniform Commercial Code', 87 *California L. Rev.* 191-268 (1999) (describing the Uniform Computer Information Transactions Act, then called Article 2B); *ProCD, Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996).
27. National Research Council of the National Academies of Sciences, *A Patent System for the 21st Century* (2004) (hereinafter NAS Patent Report); Federal Trade Commission, *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy*, Washington D.C. 2003, <www.ftc.gov/os/2003/10/innovationrpt.pdf> (hereinafter FTC Report). A group in the United Kingdom has issued a report expressing similar concerns, *see* The Royal Society, Keeping Science Open: the effects of intellectual property policy on the conduct of science, <www.royalsoc.ac.uk/policy/>. In the main, our paper focuses on the changes noted by the NAS Patent Report as of such substance that they deserve continued national scrutiny, *see* NAS Patent Report, at 15-31. One of the authors (Dreyfuss) was a member of the NAS Committee that worked on this Report.
28. *See*, e.g., J.P. Walsh, A. Arora, and W.M. Cohen, 'Effects of Research Tool Patents and Licensing on Biomedical Innovation', in Wesley M. Cohen and Stephen A. Merrill (eds.), *Patents in the Knowledge Based Economy*, Washington D.C., National Academies Press, 2003; R.J. Mann, 'Do Patents Facilitate Financing in the Software Industry?', 83 *Texas L. Rev.* 961-1030 (2005).
29. The number of US patents has tripled from 66,290 in 1980 to 184,172 in 2001. *See* Mann, *supra* note 28, at p. 1001.
30. The number of practitioners affiliated with the American Bar Association Intellectual Property Section increased 39% between 1996-2002. *See* NAS Patent Report, *supra* note 27 at p. 26; *see also* Mann, *supra* note 28; J.R. Barton, 'Reforming the Patent System', 287 *Science* 1933-1934 (2000).

domain of accessible knowledge benefits from the upswing in issuances. Since the other side of the patent coin is disclosure, more patents mean more information is revealed in the specifications, with the result that more information is available for immediate use.[31] Furthermore, all the information in a patent becomes accessible once the term expires. Significantly, that term is considerably shorter (at least two generations shorter) than the copyright term and in some cases, it is shorter than the period in which a trade secret is likely to stay secret. And while it is true that the number of patent attorneys is growing at a faster pace than spending on research and development (R&D)[32] – which may suggest that some information that was previously allowed to fall immediately into the public domain is now being privatized – it is also conceivable that the productivity of scientific research is increasing (or that the complexity of inventive output is increasing), requiring a change in the ratio between spending on R&D and spending on patent advice.[33]

There are other reasons to think that the domain of accessible knowledge is growing. In countries that previously measured the patent term from the date of issuance, the TRIPS Agreement (which measures the term from application) could, if examination is conducted quickly, decrease the time of exclusivity.[34] More important, at least in the United States, there are several judicial changes that have weakened patent protection.

First, the establishment of the United States Court of Appeals for the Federal Circuits channels all patent appeals to a single court.[35] Thus, patentees can no longer forum shop for sympathetic judges. Second, the probability that particular activity will be regarded as infringing has decreased because the Federal Circuit is using

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31. *See*, e.g., R. Polk Wagner, 'Information Wants To Be Free: Intellectual Property and the Mythologies of Control', 103 *Columbia L. Rev.* 995-1034 (2003).
32. *See* Mann, *supra* note 28; Barton, *supra* note 30.
33. Cf. A.K. Rai, 'The Information Revolution Reaches Pharmaceuticals: Balancing Innovation Incentives, Cost, And Access In The Post-Genomics Era', 2001 *U. Ill. L. Rev.* 173-210 (2001), pp. 189-92 (describing efficiencies in biotechnology research). Of course, it is also possible that patent prosecution has enjoyed even higher productivity gains: computerization makes it easier to draft applications and amendments; the Patent Cooperation Treaty, June 19, 1970, 28 *U.S.T.* 7645, 9 *I.L.M.* 978, and the European Patent Convention, Convention on the Grant of European Patents, Oct. 5, 1973, 13 *I.L.M.* 268 decrease the work involved in filing a multiplicity of national applications.
34. TRIPS Art. 33. In the United States for example, a 17-year term from issuance is longer than a 20 year term from application if examination takes more than 3 years, as it does in several fields, including biotechnology. However, it is probably more likely that the term is growing: for patents pending at the time the TRIPS Agreement went into force, the term is the longer of the two. *See generally*: M.A. Lemley, 'An Empirical Study of the Twenty-Year Patent Term', 22 *Am. Intell. Prop. L. Ass'n Q.J.* 369 (1995). Further, TRIPS does not set a maximum limit on the term and the US Patent Act is busily accumulating a series of patent term extensions to deal with problems in particular industries. *See* 35 U.S.C. §§ 154-156.
35. 28 U.S.C. § 1295. *See generally*, A.K. Rai, 'Engaging Facts and Policy: A Multi-Institutional Approach to Patent System Reform', 103 *Columbia L. Rev.* 1035-1135 (2003); R. Cooper Dreyfuss, 'A Case Study in Specialized Courts', 64 *N.Y.U. L. Rev.* 1 (1989).

its authority to significantly narrow the scope of patent claims.[36] Specifically, it has strengthened the requirements of disclosure. Emphasizing the comprehensibility of the patent to a person of ordinary skill in the art, the court has invalidated a series of patents on the ground that they claimed more than they enabled that person to do, or failed to describe the invention in sufficient detail.[37] The court has also made it clear that even valid patents are dependent on what the ordinary artisan can understand and cannot be interpreted in ways that extend protection beyond what is disclosed.[38] In addition, the court has substantially weakened the doctrine of equivalents. This doctrine, which expands patent claims beyond their literal meaning to include substitutions within the capability of an ordinary artisan, would, absent the Supreme Court's repeated intervention, have been overruled.[39] Even after the Supreme Court reaffirmed the doctrine's continued vitality, the Federal Circuit has continued to chip away at it.[40] Finally, claims drafted in means-plus-function format, which were once read broadly, are now limited by their specifications.[41]

Still, it is likely that those who fear commodification have the stronger arguments. On the international front, the TRIPS Agreement broadens the base of inventors who are eligible for patents in each country; the Patent Cooperation Treaty and the European Patent Convention make it cheaper for inventors to take advantage of the TRIPS opportunity.[42] Thus, there may have been inventions that would not have formerly been protected in multiple WTO members that now will be. And since the compliance mechanism of the TRIPS Agreement forces nations that may have taken a relaxed attitude toward certain infringements to enforce intellectual property rights

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36. W.M. Landes and R.A. Posner, *The Economic Structure of Intellectual Property Law*, Cambridge (Mass.), The Belknap Press of the Cambridge University Press, 2003, p. 338, citing D. R. Dunner, J. M. Jakes, and J.D. Jarceski, 'A Statistical Look at the Federal Circuit's Patent Decisions: 1982-1994', 5 *Fed. Cir. Bar J*. 151-156 (1995), at p. 152.
37. *See*, e.g., *University of Rochester v. G.D. Searle & Co., Inc*., 358 F.3d 916 (Fed. Cir. 2004) and cases discussed therein.
38. *See*, e.g., *ACTV, Inc. v. Walt Disney Co*., 346 F.3d 1082(Fed. Cir. 2003), pp. 1090-1091; *Regents of the University of California v. Eli Lilly & Co*., 119 F.3d 1559 (Fed. Cir. 1997). *See also Gentry Gallery, Inc. v. Berkline Corp*., 134 F.3d 1473 (Fed.Cir.1998).
39. *See*, e.g., *London v. Carson Pirie Scott & Co*., 946 F.2d 1534 (Fed. Cir. 1991) (Judge Lourie); *Charles Greiner & Co. v. Mari-Med Mfg. Co*., 962 F.2d 1031 (Fed. Cir. 1992) (Judge Rader); *American Home Products Corp. v. Johnson & Johnson*, 25 U.S.P.Q.2d 1954 (Fed. Cir. 1992) (Judge Plager). The Supreme Court brought a halt to the Federal Circuit's most zealous attempts to curtail the doctrine of equivalents in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co*., 520 US 17, 40, 39 n 8 (1995) and then again in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabashuki Co*., 122 S Ct 1831 (2002). According to *Festo,* the doctrine of equivalents retains its vitality but cannot be used to capture ground surrendered during prosecution through a narrowing amendment.
40. *See*, e.g., *Honeywell Intern. Inc. v. Hamilton Sundstrand Corp*., 370 F.3d 1131 (Fed. Cir. 2004) (extending the rule in *Festo* to the act of restating a dependent claim in independent form, even when the claim had never been rejected or amended or narrowed); *Glaxo Wellcome, Inc. v. Impax Laboratories, Inc*., 356 F.3d 1348 (Fed. Cir. 2004) (utilizing a doctrine of 'infectious estoppel,' under which subject matter surrendered by amendment of one claim is also surrendered for other claims containing the same limitation found in the first claim).
41. *See*, e.g., *Intellicall, Inc. v. Phonometrics, Inc*., 952 F.2d 1384 (Fed.Cir.1992).
42. On the PCT and EPC, *see supra*, note 33.

more fully,[43] the effect is a reduced ability to engage in what Pamela Samuelson calls intellectual property arbitrage – avoidance of the patent laws of one country by utilization of inventions in places where they are not protected.[44]

As to developments in the United States, the Federal Circuit is likely a net benefit to patentees, despite the changes it has made to the law on infringement and patent scope. Judges versed in technology, who have only one tool (patent law) with which to advance the nation's agenda of promoting innovation, and who know that the health of their docket depends on active patenting, are at least as likely to be sympathetic to patentees as to public access interests.[45] Furthermore, there are several substantive legal changes that can be regarded as posing concrete threats to scientific progress.

The first change is in the coverage of patent law: the Supreme Court's decisions in *Diamond v. Chakrabarty* (on the patentability of bio-organisms)[46] and *Diamond v. Diehr* (on computer software),[47] along with the Federal Circuit's decision in *State Street Bank v. Signature Financial Group* (on business methods),[48] have combined to extend patent protection to new subject matter. That is, in earlier eras, end-products were considered the sole subjects of patent protection. These were products directed at consumers – the products of technology, and not the targets of science. Discoveries mainly of interest to science stayed in the public domain. For example, in *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, the Supreme Court held that

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43. TRIPS Agreement, arts. 42, 64. This effect is heightened by unilateral actions taken by the United States to promote intellectual property protection internationally, *see* 19 U.S.C. §§ 2411-2420 (1994).
44. *See* P. Samuelson, 'Intellectual Property Arbitrage: How Foreign Rules Can Affect Domestic Protection', in K.E. Maskus & J.H. Reichman (eds.), *International Public Goods and Transfer of Technology under a Globalized Intellectual Property Regime*, Cambridge (Mass.), Cambridge U. Press, 2005, pp. 635-652; P. Samuelson, 'Intellectual Property Arbitrage: How Foreign Rules Can Affect Domestic Protection', 71 *U. Chi. L. Rev.* 223-239 (2004).
45. Although we restrict our analysis to developments in the United States, it is worth noting that to the extent that these developments can be attributed to the establishment of a technocratic court so specialized that it sees patent law as the only tool for promoting innovation, these developments may become pervasive, for there are other nations that are also considering a move to specialized patent adjudication, *see*, e.g., S. Zekaria, 'EU Bids for European Patent Court', Eupolitix.com, <www.eupolitix.com/EN/News/200402/f8a15ca7-6eab-4db1-a642-3f0f4225f287.htm>; cf. T. Takenaka, 'Comparison of U.S. and Japanese Court Systems for Patent Litigation: A Special Court or Special Divisions in a General Court', <www.law.washington.edu/Casrip/Symposium/Number5/pub5atcl6.pdf>.
46. 447 U.S. 303 (1980).
47. 450 U.S. 175 (1981).
48. 149 F.3d 1368 (Fed. Cir. 1998). This case was the culmination of a long fight over the terms under which software would be protected. The Supreme Court entertained three cases on computer software (the other two were *Gottschalk v. Benson*, 409 U.S. 63 (1972), and *Parker v. Flook*, 437 U.S. 584 (1978)); the Federal Circuit and its predecessor court also entertained a series of cases on this issue, *see*, *In re Alappat*, 33 F.3d 1526 (Fed.Cir.1994) (in banc); *Arrhythmia Research Technology Inc. v. Corazonix Corp.*, 958 F.2d 1053 (Fed.Cir. 1992), *In re Abele*, 684 F.2d 902 (CCPA 1982); *In re Walter*, 618 F.2d 758, 205 USPQ 397 (CCPA 1980); *In re Freeman*, 573 F.2d 1237 (CCPA 1978), and for business methods, *In re Meyer*, 688 F.2d 789 (CCPA 1982): *In re Maucorps*, 609 F.2d 481(CCPA 1979).

packets containing mixtures of bacteria were 'no more than the discovery of some of the handiwork of nature and hence unpatentable;'[49] and in *Brenner v. Manson*,[50] the Court defined the utility required for patent protection as end-use (rather than research-use) utility. But both the new biology and computer science break down these dichotomies: advances in these fields are inherently dual in character.[51] Biotechnology inventions, for example, can have immediate commercial application as diagnostics or treatments and thus qualify for patent protection, even though they have enormous import to biomedical research. Similarly, mathematical algorithms may be the basis of commercial software, but they simultaneously function as building blocks of knowledge.[52]

A determination could have been made to follow an approach analogous to the idea-expression and merger doctrines of copyright law, and to deny protection to inventions that merge scientific principles with technological application.[53] The decision to do otherwise means that the number of patents will increase. Even more worrying, however, is the power that these 'upstream' patents exert. Consider, for example, patents on applications of NF-κB, a cell-signaling pathway;[54] a patent claiming all antibodies recognizing CD34, an antigen found on stem cells,[55] and a test for the gene BRCA1, which is linked to one form of breast cancer. These patents can be (and in some cases, have been) asserted not only in *product markets* – against those who use the patented products to treat or test patients, but also in *innovation markets* – against those who utilize the inventions for research purposes: scientists who study pharmaceutical products that function via the NF-κB pathway; researchers who need CD34 to conduct stem cell research; and those who want to exclude BRCA1-caused breast cancer in order to find other genetic susceptibilities to this set of diseases. Unlike the case with most end products, there are no substitutes

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49. 333 U.S. 127, 131 (1948). *See also*: *O'Reilly v. Morse*, 56 U.S. (15 How.) 62 (1853) (holding that abstract principles are not statutory subject matter).
50. 383 U.S. 519 (1966).
51. *See*, e.g., F. Narin and D. Olivastro, 'Status Report: Linkage Between Technology and Science', 21 *Research Policy* 237 (1992) (using citation measures to demonstrate that the tie between science and technology is becoming closer over time and is more pronounced in drugs, medicine, chemistry, and computing than in fields such as machinery and transportation).
52. *See*, e.g., D.S. Chisum, 'The Patentability of Algorithms', 47 *U. Pitt. L. Rev.* 959, 1017 (1986). *See also* R. Cooper Dreyfuss, 'Are Business Method Patents Bad for Business', 16 *Santa Clara Comp. & High Tech. L.J.* 263-280 (2000) (noting that business method patents have similar problems in that they control broad ranges of business activity); C. Vorndran and R.L. Florence, 'Bioinformatics: Patenting the Bridge Between Information Technology and the Life Sciences', 42 *IDEA* 93-131 (2002) (showing that bioinformatics inventions can be categorized as upstream science, algorithms, and business methods).
53. *See*, e.g., *Baker v. Selden*, 101 U.S. 99 (1879); *Computer Assocs. Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693, 707 (2d Cir.1992).
54. *See* NAS Patent Report, *supra* note 27, at p. 62; US Patent No. 6,410,516; A. Rai and R. Eisenberg, 'Bayh-Dole Reform and the Progress of Biomedicine', 66 *Law and Contemp. Probs.* 289-314(2003).
55. *See* A. Bar-Shalom and R. Cook-Deegan, 'Patents and Innovation in Cancer Therapeutics: Lessons from CellPro', 80 *The Milbank Quarterly* 637 (2002).

– no 'invent-arounds' – for those who are working in the relevant areas. And as noted earlier, researchers do not have the option – as they would in copyright – of independently re-creating the technology in clean rooms.

Secondly, observers worry that the standard of non-obviousness is declining.[56] Statutorily, the non-obviousness requirement prevents patenting when a person of ordinary skill in the art could have arrived at the claimed 'invention' by building on existing art, or combining it, in an incremental way. This test is arguably being diluted by recent decisions. One problem is said to be the Federal Circuit's 'obvious to try' doctrine.[57] While it might seem that no special incentives are needed for advances that are obvious to try, the Federal Circuit's view is that a patent should nonetheless be available in situations where the inventor faces a large number of alternatives, not all of which will necessarily pan out.[58] Admittedly, it is easy to understand why the court might favor this approach. As sciences mature, it can become fairly clear where (and what) work needs to be done; without the possibility of a patent reward, no one may be willing to methodically pursue those prospects. What can be disputed is the Federal Circuit's implementation of this approach. Observers are concerned that the court has an unrealistic idea of which undertakings are risky. Further, when it examines the number of choices, the court fails to consider that modern science makes heavy use of automated equipment that can test alternatives quickly, cheaply, and easily.[59]

The way the court looks at combinations of prior art is similarly problematic. Here, the Federal Circuit is working hard to make examiners realize that putting known information together can be an inventive process. It is trying to prevent examiners from using the patent disclosure against the applicant, as a guide for understanding how to assemble prior knowledge. To that end, the court has been requiring examiners to demonstrate what it was in the prior art that would have led the ordinary artisan to combine references.[60] However, as salutary as the court's goals may be, the result of its approach is that examiners may be disabled from considering general tacit knowledge, some of which is such common wisdom (or common sense) that it is not likely to be published (or, indeed, publishable).[61]

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56. *See*, e.g., D.L. Burk and M.A. Lemley, 'Policy Levers in Patent Law', 89 *Virginia L. Rev.* 1575-1696 (2003); D.L. Burk and M.A. Lemley, 'Is Patent-Law Technology-Specific?', 17 *Berk. Tech. L.J.* 1155-1206 (2002) (criticizing decisions on biotechnology).
57. *See* NAS Patent Report, *supra* note 27, at pp. 72-78; FTC Report, *supra* note 27, Ch. 4, at pp. 8-19.
58. *See* NAS Patent Report, *supra* note 27, at p. 75 (citing *In re O'Farrell*, 853 F.2d 894 (Fed. Cir.1988)).
59. One could go further and by analogy to the decision in *Feist Publications, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340 (1991), for copyright, argue that the obvious-to-try doctrine, which essentially protects works on the basis of the 'sweat of the brow' invested in them, is inconsistent with constitutional limitations on Congress's intellectual property powers.
60. *See*, e.g., *In re Lee*, 277 F.3d 1338 (Fed. Cir. 2002); *In re Dembiczak*, 175 F.3d 994 (1999).
61. There is also substantial concern with the Federal Circuit's use of commercial success as a factor demonstrating inventiveness, *see*, e.g., *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367 (Fed. Cir. 1986) (also suggesting other so-called secondary considerations, including failure of others, long-felt need, and unexpected results). Although one can certainly argue that if an

The availability of patents on trivial variations and marginal improvements essentially withdraws from the public domain information that, effectively, was already there: either it was described in the literature, or was so easily grasped, the patent system was not needed to encourage the advance. Additionally, making incremental improvements subject to patent rights undermines the patent term because patentees can engage in so-called 'evergreening' – extending the effective term by patenting an improvement just as the term on the underlying invention is about to expire.[62]

The low level of skill that the court attributes to people of ordinary skill in the art also creates other problems for the system's effect on progress. Since the tests for disclosure, enablement, the doctrine of equivalents, and inventiveness all turn on the abilities of a person of ordinary skill in the art, and the court attributes the same level of knowledge in every place where the test applies, a low level of skill does more than make patents easier to acquire. Because an unimaginative artisan is also unable to learn much from disclosures or to make substitutions in ingredients, patents are becoming narrower. While narrow patents may appear to improve access, patentees can get around that problem by simply obtaining more patents.[63] These create problems of their own: thickets of rights that newcomers to a field must wade through to determine their freedom of action,[64] and more work for the patent office (leading to more opportunities to make mistakes). By measuring the scope of a patent by what a person of ordinary skill can do and patentability by what a person with that *same* level of skill can't do, the court has created a seamless web of patenting, thereby depriving the public of room to 'tinker' – to play around with a technology and learn from it. [65]

The fourth reason that observers worry about access relates to defenses to infringement. Here, the most significant problem is the narrowing of the experimental use defense. Traditionally, noncommercial users and in particular, university researchers, have benefited from a common law defense that permitted unauthorized use for the 'gratification of scientific tastes, or for curiosity, or for amusement.'[66] In

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advance were marketable, it would have been invented if it was easy to do, it is sometimes the case that success is due to other factors, such as collateral developments or good marketing. Mistakes on patentability are especially costly when an invention is commercially successful. Further, litigators claim that instructions on commercial success lead juries to disregard the evidence that tends to show obviousness.

62. FTC Report, *supra* note 27, at Ch. 5, 6.
63. Landes and Posner, *supra* note 36, at pp. 339-340; B.H. Hall, 'Exploring the Patent Explosion', 30 *The Journal of Technology Transfer* 35-48 (2005).
64. *See*, e.g., C.S. Shapiro, 'Navigating the Patent Thicket: Cross Licenses, Patent Pools, and Standard-Setting', in A. Jaffe, J. Lerner and S. Stern (eds.), 1 *Innovation Policy and the Economy* 119-150, (2001) (,), available at: <faculty.haas.berkeley.edu/shapiro/thicket.pdf>.
65. This term was coined by Edward Felten, a Princeton University computer science professor, *see* 'Tinkerers' Champion', *The Economist* (June 20, 2002), available at: <www.economist.com/science/tq/displayStory.cfm?story_id=1176171>.
66. W.C. Robinson, *The Law of Patents for Useful Inventions*, Little, Brown and Company, 1890, § 898; *Whittemore v. Cutter*, 29 F. Cas. 1120 (C.C.D. Mass. 1813); *Sawin v. Guild*, 21 Fed. Cas. 554, F. Cas. No. 12391 (C.C.D. Mass. 1813).

addition, there is a statutory defense permitting use of patented drugs to generate pre-market clearance data,[67] which had been applied to preclinical as well as clinical usages (which is to say, experiments that generate clearance data and also create spillover benefits for other research).[68] Recently, however, both defenses have been narrowed. The common law defense is now unavailable for work done 'in keeping with the alleged infringer's legitimate business regardless of commercial implications.'[69] Since research is a research university's business, its scientists can (presumably) no longer avail themselves of the defense. And while it is true that academics have not traditionally been sued for infringement, that norm may erode now that the Federal Circuit has spoken.[70] As to the statutory defense, it is now available only for clinical research, work whose *sole* purpose is to produce data for pre-market clearance purposes.[71]

In similar fashion, the court has been unsympathetic to arguments that innovation is fueled not only through patenting, but also through vibrant competition. Hence, it has been unreceptive to promoting access through antitrust law, by utilizing doctrines of patent misuse, or by redefining the availability of remedies. Instead, it has enthusiastically enforced derogations from the first sale doctrine[72] and it has permitted a patentee to refuse to deal with potential licensees.[73] Further, the court is willing to award infringement damages to patentees who have not themselves exploited their inventions – despite a strong dissenting voice, which argued that withholding relief would ensure public enjoyment of the benefits of inventiveness.[74]

1.4. Are there Constraints on Reform?

Another difference between the commodification debate in copyright and patent law relates to views on the constraints under which would-be reformers operate. One

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67. 35 U.S.C. § 271(e).
68. Prior to this decision, research that had other uses in addition to generation of pre-market clearance data could take advantage of the defense, *see*, e.g., *Amgen, Inc. v. Hoechst Marion Roussel*, Inc., 3 F.Supp.2d 104, 107-08 (D.C. Mass. 1998); *Abtox, Inc. v. Exitron Corp.*, 122 F.3d 1019 (Fed. Cir. 1997); *Telectronics Pacing Systems v. Ventritex, Inc.*, 982 F.2d 1520 (Fed. Cir. 1992). *See generally*: N. Groombridge and S. Calabro, 'Integra Lifesciences v. Merck – Good for Research or Just Good for Research Tool Patent Owners?', 22 *Biotech. L. Rep.* 462 (2003).
69. *Madey v. Duke University*, 307 F.3d 1351, 1362 (Fed. Cir. 2002).
70. *See* Walsh, et al., *supra* note 28, at 324-28. The Federal Circuit has been unsympathetic to university researchers in other ways as well, *see*, e.g., *Griffith v. Kanamaru*, 816 F.2d 624, 628 (1987) (refusing to give academics leeway to delay work in order to provide students with interesting projects).
71. *Merck KGaA v. Integra Life Sciences I, Ltd.*, 125 S.Ct. 2372 (2005).
72. *See Monsanto Co. v. McFarling*, 302 F.3d 1291 (Fed. Cir. 2002), *later proceeding*, 363 F.3d 1336 (Fed. Cir. 2004); *Mallinckrodt, Inc. v. Medipart, Inc.*, 976 F.2d 700 (Fed. Cir. 1992).
73. *In re Independent Service Organizations Antitrust Litigation*, 203 F.3d 1322 (Fed. Cir. 2000).
74. *Rite-Hite Corp. v. Kelley Co.*, 56 F.3d 1538, 1547-48 (Fed. Cir. 1995); 1562-63 (J. Nies, dissenting).

arguable difference lies in the relationship between intellectual property rights and industrial organization; the other, in the obligations of international law.

i. Industrial organization. On the cultural side, the debate over commodification is, to a large extent, a debate over whether current forms of industrial organization make sense in light of technological developments. Thus, it has been argued that new methods of distribution, particularly the Internet, make the role of publishers superfluous,[75] and that new methods of production, exemplified by Linux, make the concept of authorship anachronistic.[76] Since copyrights are largely viewed as protecting authors and publishers, the argument is that *no* commodification is now needed or (less dramatically) that moves toward *more* commodification are misguided attempts to preserve outmoded industrial forms. In short, reformers of the copyright system see substantial room for simply reversing the commodification trend (or, international obligations to one side, eliminating some or all copyrights).

Perhaps because the costs of scientific training and research remain so high, there are few in the technology community who believe that disintermediation or reliance on peer-to-peer production will lead to an optimal level of innovation.[77] To the contrary, observers regard patents as of enduring – or even increasing – importance. In this regard, two interrelated developments are of particular significance.

The first is that there is an increase in specialization. In the life sciences, for example, there are now firms that focus only on manufacturing research tools; others that mainly screen drugs against target proteins. Woody Powell has documented the effect of specialization on the way research is organized. He notes that traditional pharmaceutical companies get larger and larger because they bring the talent they need inside the firm through hiring. Further, they vertically integrate by joining research, development, distribution, and marketing under one roof. In contrast, modern biotech companies tend to rely on networking: they stay small and acquire

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75. J. Besek and J.C. Ginsburg, 'The Future Of Electronic Publishing: A Panel Discussion', 25 *Colum. J.L. & Arts* 91-117 (2002); N. Weinstock Netanel, 'Book Review: Cyberspace 2.0', 79 *Tex. L. Rev*. 447-491 (2000).
76. J.M. Balkin, 'Digital Speech And Democratic Culture: A Theory Of Freedom Of Expression For The Information Society', 79 *N.Y.U. L. Rev.* 1-58 (2004); Y. Benkler, 'Through the Looking Glass: Alice and the Constitutional Foundations of the Public Domain', 66 *Law and Contemp. Probs*. 181-224 (2003), at p. 173; Y. Benkler, 'Coase's Penguin, or, Linux and The Nature of the Firm', 112 *Yale L.J*. 273-357 (2002), at pp. 275-290; Y. Benkler, 'From Consumers to Users: Shifting the Deeper Structures of Regulation Toward Sustainable Commons and User Access', 52 *Fed. Comm. L.J*. 561-579 (2000), at p. 562.
77. Yochai Benkler may be an exception, *see* id. However, a close reading of his work makes it clear that he is analogizing from the copyright experience without considering the differences in such issues as training costs, production methods, infrastructure needs, the size of initial investments, need for pre-market clearance, or the cost of consumer education. For a less doctrinaire view, *see* A. Rai, 'Open and Collaborative Biomedical Research', in R. Hahn (ed.), *Intellectual Property Rights In Frontier Industries: Software And Biotech*, AEI-Brookings Press, Forthcoming: <papers.ssrn.com/sol3/papers.cfm?abstract_id=574863> (2004).

the expertise they need on each project through serial collaborative ventures.[78] Ronald Mann has observed a somewhat analogous situation in the software industry, where new technologies are first developed in small start-ups, which later grow, license, or get acquired.[79] This is in sharp contrast to the cultural industries, which have undergone substantial consolidation, facilitated by regulatory liberalization and repeal of cross-ownership rules.[80]

This shift in technological production has put significant pressure on the patent system. Firms specialized in focused upstream work need upstream patents to attract funding and protection against free riders. In an environment in which networking is key to survival, patents are also needed to serve as signals of business and technical competence. They let investors know that a firm has exclusive technical knowledge that can be exploited and that its principals understand the business steps that need to be taken to exploit that knowledge effectively. Patents also alert others in the potential network to the scientific capabilities that the patenting firm possesses.[81] In addition, of course, patents create a way for firms to transfer information – patents along with associated know-how – and to enter into collaborative arrangements without losing control over what they uniquely know.[82]

The second development, also somewhat unique to technological products, is the changing behavior of universities. At one time, much academic work quickly became freely (or close to freely) accessible to the public, either because there was a norm against patenting or because the work was funded by the government and the government's practice was to license their patents on a nonexclusive basis. With the passage of the Bayh Dole Act in 1980,[83] this changed. Although the Act merely *permits* universities to retain patent rights in federally funded inventions, universities have adopted patenting with considerable enthusiasm. The ability to protect profits in their work makes universities attractive partners in the networks described above. The technology transfer offices created to deal with Bayh Dole have also tended to take on lives of their own, encouraging licensing and assigning of patent rights;

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78. W.M. Powell, 'Networks of Learning in Biotechnology: Opportunities and Constraints Associated with Relational Contracting in Knowledge-Intensive Fields', in R. Dreyfuss, D.L. Zimmerman and H. First (eds.), *Expanding the Boundaries of Intellectual Property: Innovation Policy For The Knowledge Society*, Oxford, Oxford University Press, 2001, p. 251 2001; W.W. Powell, 'Inter-organizational Collaboration in the Biotechnology Industry', 151 *J. Institutional and Theoretical Economics* 197 (1996), at p. 205.
79. Mann, *supra* note 28. *See also* B. Hall and R. Ziedonis, 'The Patent Paradox Revisited: An Empirical Study of Patenting in the U.S. Semiconductor Industry', 32 *Rand J. Econ.* 101-128 (2001).
80. For a discussion, *see* Dinwoodie and Dreyfuss, *supra* note 2 [CWRU]; Y. Benkler, 'A Political Economy of the Public Domain: Markets in Innovation Goods v. the Marketplace of Ideas', in R. Cooper Dreyfuss et al. (eds.), *supra* note 78, pp. 291-292 (,).
81. *See,* e.g., C. Long, 'Patent Signals', 69 *U. Chi. L. Rev.* 625 (2002); B. H. Hall, *supra* note 63.
82. *See*, e.g., R.P. Merges, 'Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations', 84 *Calif. L. Rev.* 1293-1393 (1996).
83. 35 U.S.C. §§ 200-212.

guiding faculty activity in ways that promote the patentability of their work and, arguably, changing faculty expectations in ways that favor commercialization.[84]

The bottom line is that reformers of the patent system must walk a fine line. These new patents potentially chill progress for the reasons set out earlier, and also because they increase transaction costs, require heterogeneous licensors to agree to terms (which has proved very difficult),[85] allow patentees to disguise coordinated actions that restrain competition,[86] and pose formidable barriers to entry.[87] At the same time, however, there are myriad business models, deals, cross licenses, and, in the litigation area, settlements and standoffs, that are predicated on patents and on their continued availability. For example, it would be difficult to repeal the Bayh Dole Act because universities now rely on the income their patents generate and their collaborators rely on the exclusivity the patents provide. Even a less dramatic action, such as cutting back on upstream patenting, could prove problematic. In the commercial sector, there are firms that now rely on patent rights. University technology transfer offices are costly to maintain; to justify them, universities need a large portfolio of inventions upon which to base patent applications and licenses. To the extent that academics work on fundamental discoveries and not incremental applications, patents on such advances are arguably key to the efficiency of university patenting operations.[88]

ii. International obligations. Because both copyright and patent law are subject to the TRIPS Agreement, one might expect that the debate on whether international law constrains reform would be the same in both arenas. Certainly, reformers of copyright law would be as unable as reformers of patent law to simply eliminate intellectual property rights entirely. Nonetheless, there is an important variation in the

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84. *See*, e.g., D. Mowery et al., 'The Effects of the Bayh-Dole Act on U.S. University Research and Technology Transfer', in L.M. Branscomb, F. Kodama, and R. Florida (eds.), *Industrializing Knowledge: University-Industry Linkages In Japan And The United States*, Cambridge (Mass), MIT Press, 1999, pp. 269-306, at p. 275 (, 1999) ('The Bayh-Dole Act is contemporaneous with a sharp increase in U.S. university patenting and licensing activity.'); R. Kneller, 'Technology Transfer: A Review for Biomedical Researchers, 7 *Clinical Cancer Research* 761-774 (2001); J.H. Reichman, 'Overlapping Proprietary Rights in University-Generated Research Products: The Case of Computer Programs', 17 *Colum.-Vla J. L. & Arts* 51-125 (1992) (providing an overview of development of US proprietary rights with an emphasis on commercial university research).
85. R.S. Eisenberg, 'Bargaining Over the Transfer of Proprietary Research Tools: Is This Market Failing or Emerging', in R. Cooper Dreyfuss et al. (eds.), *supra* note 78. An example is the licensing practices of Myriad Pharmaceuticals in connection with its patent on breast cancer genes, *see* Walsh, *supra* note 28, at p. 312.
86. R.P. Merges and R.R. Nelson, 'On the Complex Economics of Patent Scope', 90 *Colum. L. Rev.* 839-916 (1990).
87. *See*, e.g., C. Shapiro, *supra* note 64; B.H. Hall and R.H. Ziedonis, 'The Determinants of Patenting in the U.S. Semiconductor Industry, 1980-1994', *Electronic Journal of Intellectual Property Rights* (1999) (Oxford IP Research Center Working Paper 04/99); M.A. Heller and R.S. Eisenberg, 'Can Patents Deter Innovation? The Anticommons in Biomedical Research', 280 *Science* 698 (May 1, 1998).
88. *See*, e.g., *University of Rochester v. G.D. Searle & Co., Inc.*, 358 F.3d 916 (Fed. Cir. 2004).

tenor of the debate, largely stemming from the fact that international copyright law has not changed to the extent that international patent law has. Thus, while it is true that the category of copyrightable subject matter has grown (through for example, the inclusion of computer programs[89] and live musical performances,[90]) and that the scope of copyright protection has expanded (for example, it now includes rental rights,[91]) the TRIPS Agreement mainly relies on the previously-existing norms of the Berne Convention, which TRIPS subsumed by reference.[92] Although the TRIPS Agreement gave these obligations a bite previously lacking, to a significant extent, copyright obligations under the Agreement are relatively well understood by member states, copyright holders, scholars, and critics.[93]

The situation is somewhat different for patents. The prior international instrument, the Paris Convention,[94] concentrated on national treatment, priority rules, and local working regulations; TRIPS created the first set of substantive requirements, cast as minimum levels of protection. Examples include the nondiscrimination provision, which states that 'patents shall be available and patent rights enjoyable without discrimination … as to the field of technology;[95] restrictions on compulsory licensing;[96] and limitations on defenses to infringement.[97] These provisions are not well understood and, indeed, have spawned several disputes that have gone through to adjudication by the dispute settlement body (the DSU). [98] The compulsory licensing provision has already become the target of discussion in a succeeding diplomatic round eventually prompting Article 31bis of TRIPS.[99] As a result of the substantial uncertainty attached to the meaning of the new patent obligations, those who would

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89. TRIPS Art. 10.
90. Art. 14
91. Art. 11.
92. *See* TRIPS Art. 9(1), referencing the Berne Convention for the Protection of Literary and Artistic Works, July 24, 1971, 1161 U.N.T.S. 31 [hereinafter Berne Convention]. The first version of the Berne Convention was concluded in 1886. TRIPS also restated the basic exceptions rule slightly, compare TRIPS Art. 13 with Berne Art. 9(2) and codified the understanding that computer programs were to be protected under copyright. *See* Berne Art. 10.
93. Although many copyright issues have been raised in the TRIPS Council, there has been only one WTO complaint that has gone through dispute resolution on copyright, s*ee* United States–Section 110(5) of the US Copyright Act, WTR/DS/160/R (Report of WTO Dispute Settlement Panel, 2000).
94. Paris Convention for the Protection of Industrial Property, July 14, 1967, 21 U.S.T. 1583, 828 U.N.T.S. 305 [hereinafter Paris Convention].
95. TRIPS, Art. 27.1.
96. Art. 31.
97. Art. 30.
98. *See* e.g., India-Patent Protection for Pharmaceutical and Agricultural Chemical Products, WT/D550/AB/R (Report of the Appellate Body, 1997) [hereinafter India-Patent Protection]; Canada-Patent Protection of Pharmaceutical Products, WT/DS114/R (Report of WTO Dispute Settlement Panel, 2000) (hereinafter Canada-Pharmaceutical Products); Canada-Term of Patent Protection, WT/DS170/R (May 5, 2000).
99. The Doha Declaration undertook to revise Art. 31(f) as it applies to importation of pharmaceuticals to countries that lack the capacity to manufacture them for the local market, *see* Declaration on the TRIPS Agreement and Public Health, Adopted on 14 November 2001, WT/MIN(01)DEC/2

like to reform patent law find that they must contend not only with arguments about the wisdom of their suggestions, and with constraints clearly imposed by TRIPS, but also with the claim that their proposals are inconsistent with (untested) international obligations.

2. PROTECTING THE DOMAIN OF ACCESSIBLE KNOWLEDGE

Part 1 demonstrated that one could certainly take the position that commodification is proceeding in ways that threaten open science, but that there are at least two constraints on reform. First, reducing the incidence of patents is a delicate matter because innovation is heavily organized around their availability. Second, new international requirements make it difficult to say how much leeway member states have to revise their laws. To explore these issues, we have been examining responses to the move to upstream patenting – to patents that protect fundamental principles of knowledge. We are particularly interested in this issue because we see it as at the intersection of many of the developments traced above: it represents a problem in its own right; it is responsible for some of the increase in the numbers of patents in the system; it is at the heart of university involvement in the patent system and a prime exemplar of the Federal Circuit's patent-dominated views on innovation.

In a previous article, we looked at three approaches that a country might take to deal with the impact of these developments on the creative environment. We considered a direct attack on the expansion of patentable subject matter and concluded that unless Article 27's requirement of technological neutrality is read narrowly, excluding particular subject matter (such as bioinformatics) from the scope of protection may be impermissible. We then looked at enacting a fair-use type defense to infringement as a way of reversing restrictive interpretations of the research exemption, and concluded that the viability of such an approach is heavily dependent on how it is interpreted by domestic courts – specifically, on whether courts track the international standards laid down by the TRIPS Agreement's 'three part tests.' Additionally, we noted that this approach might also trigger a technological-neutrality argument. Finally, we considered an approach that would protect fundamental researchers from patent infringement suits, if they agreed to make the work accomplished with patented technology publicly available. We suggested that such a remedies-based approach may interfere with the obligations set out in Articles 41-45. However, because the remedies provisions of the Agreement contemplate more deference to national exigencies than do other provisions of TRIPS, it was our view that this may be the strategy most likely to pass muster.

In this piece, we continue our consideration of approaches to the problem of upstream patenting. Here, we look at invigorating the non-obviousness requirement

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[hereinafter Doha Declaration], at <docsonline.wto.org/DDFDocuments/t/WT/min01/DEC2.doc> (Nov. 20, 2001).

for patentability, at altering the scope of rights, and – because the remedies approach appears so promising – at a strategy recently proposed by the National Academies of Science's Committee on Intellectual Property Rights in the Knowledge-Based Economy to give certain infringers immunity from suit by, essentially, condemning patent rights for use in government-funded research.[100]

a. *Non-obviousness*. As noted, many observers of the patent system are particularly concerned with what they consider erosion of the obviousness standard. In their view, it is this phenomenon that is mainly responsible for the ease with which minor innovations can now be protected and for the ability of patentees to extend the effective duration of protection by patenting successive minor improvements. If, they say, the standard were re-invigorated, there would be fewer patents, and information that was patented would be released more quickly into the public domain.

In fact, several modifications are being implemented or are under active consideration. The Federal Circuit is already retrenching on some of the substantive positions that have been criticized. For example, the court recently declined to reverse a decision rejecting a patent on the ground that the examiner had considered tacit knowledge.[101] There is also some movement on procedure. The Patent Office now takes a 'second look' before issuing business method patents, where the problem of tacit knowledge has been particularly acute.[102] Serious consideration is being given to other ideas as well, including the adoption of a post-grant inter-partes opposition procedure,[103] revisions in the incentive structure within the PTO,[104] and the use of experts to provide advice on such matters as the general state of knowledge in the field and the inventiveness of those with ordinary skill in the art.[105]

More drastic changes may also be considered. As noted earlier, the statute refers to the 'person having ordinary skill in the art'[106] – that is, the invention must be something that the person of ordinary skill could not have done with the prior art available at the time of the invention. This language reads as if the requirement depends on historical facts – what persons of ordinary skill knew at the time the

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100. *See* NAS Patent Report, *supra* note 27 (suggesting that government funded work be deemed as within the government contractor provisions of 28 U.S.C. § 1498).
101. *See*, e.g., *In re Berg*, 320 F.3d 1310 (Fed Cir. 2003). The court has also emphasized the need for a nexus between commercial success and specific activity of the patentee, *see*, e.g., *Brown & Williamson Tobacco Corp. v. Philip Morris Inc.*, 229 F.3d 1120, 1130 (Fed. Cir. 2000). Such a requirement, if taken seriously, would be helpful because it would focus decision-makers on the question whether the patentee's efforts and contribution were unique – which is to say, inventive.
102. *See*, e.g., Linda E. Alcorn, 'Pursuing Business Method Patents In the US Patent and Trademark Office', 20 *Computer and Internet Lawyer* 27-34 (2003), at p. 30 (noting large reduction in business method patents issued after institution of a second look procedure within the PTO).
103. *See*, e.g., FTC Report, *supra* note 27, at p. 7; NAS Patent Report, *supra* note 27, at p. 5.
104. *See*, e.g., R.P. Merges, 'As Many As Six Impossible Patents Before Breakfast: Property Rights For Business Concepts And Patent System Reform', 14 *Berkeley Tech. L. J.* 577-615 (1999).
105. *See* R.S. Eisenberg, 'Obvious To Whom? Evaluating Inventions from the Perspective of Phosita', 19 *Berkeley Tech. L.J.* 885-906, (2004), at pp. 899-900.
106. 35 U.S.C. § 103. *See also Graham v. John Deere Co.*, 383 U.S. 1 (1966).

invention was invented. If that were the case, then perfecting a measurement of what inventors knew would solve the problem. Arguably, however, the 'person with ordinary skill in the art,' as used for non-obviousness, is a term of art (what was once called a 'legal fiction'); it is not meant as an empirical question, but rather the term provides cover for judges and the patent office to pursue particular social goals. As Mark Lemley and Dan Burk have argued, the level of skill should be set sector by sector, depending on the needs of each industry.[107]

Implementing this approach might result in the standard of inventiveness being raised for some technologies and lowered for others. However, it is rather likely that the Lemley-Burk suggestion will lead to a general rise in the standard of inventiveness. To see why, it is necessary to remember that the person-with-ordinary-skill formulation is used not only for obviousness, but also as a benchmark for determining compliance with the various disclosure requirements,[108] and to decide the scope of the patent right.[109] These issues could be decoupled. If each is analyzed separately (as Lemley and Burk suggest[110]), then the decision on what a person of ordinary skill knows will no longer represent a compromise among policies and will instead optimize the law on each issue individually. For disclosure, where the goal is to induce inventors to reveal maximal amounts of information, retaining a low level of skill might be desirable. For claiming purposes, the level could be set empirically so that scientists could intuit the scope of the claims based on their actual knowledge. If the goal for non-obviousness is to prevent known material from being privatized, the level of skill attributed to persons in the art could then be raised.

For example, in the spirit of another suggestion made by Rebecca Eisenberg, if the level of skill in each area were separately determined, it could be measured for non-obviousness by whether the invention exceeds what a person 'with an ordinary level of inventiveness in the art' could accomplish. Furthermore, courts could consider the way research is actually conducted – with robots and other automated equipment that makes it easier to try many alternatives, and in collaborative teams, that in combination know more than any one ordinary artisan. Once it is recognized that those who choose to work in a field do so because they have a flair for it and are capable of modest imaginative stretches, and that they often work in groups that facilitate combining pieces of diverse information, the kinds of incremental developments that produce such problems as patent thickets and ever-greening would become unprotectable.

Such an approach might not do too much violence to the ways in which industry is organized as it would preserve patents for significant discoveries – the ones around which most deals are likely organized. It would also preserve patenting in the arena in which university researchers are active. But would raising the inventive step through any of these approaches violate the TRIPS Agreement?

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107. *See* Burk and Lemley, *supra* note 56, at p. 1674.
108. *See* § 112: by common law, decisions on enablement, written description, and best mode all look at whether the person of ordinary skill in the art could learn enough from the disclosure.
109. *See*, e.g., *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605 (1950).
110. Burk and Lemley, *supra* note 56, at p. 1680.

We believe that it should not. Article 27(1) requires only that member states offer protection to inventions that are 'new, involve an inventive step and are capable of industrial application.' It does not provide a precise definition of the height of that step, perhaps reflecting the fact that such assessments vary over time, among member states, and arguably even between different technologies.[111] The panel in *Canada-Pharmaceutical Patents* was reluctant to impose a controlling international norm absent a clear dictate in the Agreement and in the face of diverse national approaches.[112] Indeed, this is a place where deference to such choices is especially warranted because national scientific communities are organized and financed differently. Cultural and economic structures may either impede or facilitate collaboration; wealth affects the availability of robotics.

States should be given even greater latitude with respect to those changes that are viewed as merely fixing mistakes caused by failure to revise the standard of skill as more becomes known in the art. In our prior paper, we argued that in assessing normalcy (for the purposes of analyzing the TRIPS compatibility of exceptions to patent rights), it was difficult to see how the position of expanded protection in 2004 has any greater claim to determine international norms than the position that existed in 1994 when the TRIPS Agreement was negotiated.[113] The proposition holds more generally. Thus, restoring the threshold of protection to a prior internationally-acceptable level should, we believe, have a presumptive validity in TRIPS disputes.

Of course, the gambit of 'restoring prior levels of protection' might be open to abuse by member states seeking to cut patent protection to below TRIPS-mandated levels. Perhaps the concept of non-violation complaints, which would be much harder to sustain, might provide a vehicle for the critical assessment of reforms enacted under this rubric. Admittedly, many scholars and policymakers fear that non-violation complaints might be a Trojan horse for the further upwards expansion of international intellectual property norms. But the effect of non-violation complaints greatly depends upon the conditions that the TRIPS Council imposes for their prosecution.[114] Prior GATT-jurisprudence, implicitly endorsed by the Appellate Body in *India-Pharmaceutical Patents*, suggests that non-violation complaints would be sustained only upon proof of reliance (and hence denial of legitimate expectations) and injury.[115] In formulating the terms under which a non-violation complaint would

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111. *See*: G.B. Dinwoodie, 'Incorporating International Norms in the Development of Contemporary Copyright Law', 62 *Ohio State Law Journal* 733-782 (2001) (noting that WTO panels are willing to adopt a dynamic interpretation of certain parts of the TRIPS Agreement).
112. *See*: Canada-Patent Protection of Pharmaceutical Products, *supra* note 98.
113. *See*: Dinwoodie and Dreyfuss, *supra* note 1.
114. In Paragraph 11(1) of the Ministerial Declaration on Implementation-Related issues and concerns, agreed at Doha on November 14, 2001, Member States directed that 'The TRIPS Council … continue its examination of the scope and modalities for [non-violation complaints… . and make recommendations to the Fifth Session of the Ministerial Conference [in Cancun 2003]. It is agreed that, in the meantime, members will not initiate such complaints under the TRIPS Agreement.' No resolution of the issue was reached at the Cancun Ministerial Conference
115. *See* India-Patent Protection, *supra* note 98. *See also* R. Cooper Dreyfuss and A.F. Lowenfeld, 'Two Achievements of the Uruguay Round: Putting TRIPS and Dispute Settlement Together', 37

be upheld, the TRIPS Council could also propose different burdens of proof, or require other elements to make out a complaint (such as proof of intent).[116]

b. *Scope*. As noted earlier, one action the Federal Circuit has taken is to narrow patent scope by interpreting the enablement and written description requirements in light of the knowledge of an artisan with a lamentably low level of skill in the field. Another approach, which may make better sense, especially if there is no decoupling of skill levels for scope and inventiveness, is an approach being pioneered by Germany and contemplated by Switzerland. It limits the scope of human gene sequence patents to the utility recited in the disclosure.[117]

The advantages of narrowing scope are evident. The human genome contains surprisingly few genes; each has multiple activities, many of which are poorly understood.[118] Furthermore, when the purpose is to learn more about how the human organism works, the human genome cannot be 'invented around.' By limiting each patentee to the utility that patentee has identified, the law creates opportunity (and patent incentives) for others to find and elucidate other biological activities associated with the patented gene. There are also reasons to prefer this approach to the Federal Circuit's. In some cases, narrowing scope by understating the level of skill in the art allows second-comers to make minor changes that allow them to compete in the patentee's primary market without having made similar investments.[119] Further, misstating the level of skill in the art diminishes the notice value of the patent claims because people in the art cannot use their actual skill to determine the metes and bounds of the invention.

Of course, narrowing the scope of patents in the manner enacted in Germany has costs. The patents envisioned by the statute could provide inadequate incentives. Proliferating patents exacerbates the problem of patent thickets, producing more work for patent offices and other researchers. Multiple patents on a single gene could also complicate cross development agreements, licensing negotiations, and other transactions.

As to TRIPS compliance, both the German and American approaches would initially be analyzed under Article 28, which delineates the rights that must be accorded a patent owner. Where the subject matter of the patent is a product, the patent confers the exclusive rights, among other things, to make or use the patented

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Virginia J. Int'l L. 275-333 (1997), at pp. 285-88.

116. *See* Dinwoodie and Dreyfuss, *supra* note 2 [CWRU].

117. N. Stafford, 'German Bio patent law passed', *The Scientist*, December 10, 2004, <www.biomedcentral.com/news/20041209/01>. A similar approach is being considered in Switzerland, *see* J. Burgermeister, 'Swiss patent proposal prompts criticism', 22 *Nature Biotechnology* 1323 (2004). The problem under Art. 27 is greater than we think it should be under an ideal interpretation of 'discrimination,' *see* Dinwoodie and Dreyfuss, *supra* note 1 [JIEL].

118. N. Wade, 'Count of Human Genes Drops Again', *New York Times*, Sec. A, p. 22, col. 3 (Oct. 21, 2004).

119. An example may be the technology at issue in *Genentech Inc. v. Novo Nordisk A/S,* 108 F.3d 1361 (Fed. Cir. 1997), where the defendant used information that arguably was known in the art to invent around the patentee's method of recombinantly producing human growth hormone.

product; if the subject matter is a process, the patentee also obtains the exclusive right to use products obtained directly by that process. The TRIPS Agreement is silent on the definition of these terms, a silence that leaves the finely-grained question of scope to member states.

It is unsurprising that the TRIPS Agreement would leave scope questions to member states.[120] Scope is the ultimate locus for balancing access and incentives interests; the task is intrinsically imprecise because it requires contextually-dependent information that cannot be easily acquired. As a result, international lawmakers are not well situated to craft definitive rules on scope. Nor are national lawmakers in much of a better position. Accordingly, they must be given latitude to fashion their own approach to questions of scope.[121] Furthermore, there is little consensus among member states on issues that affect scope, including, for example, the doctrine of equivalents. It is, as the *Canada-Pharmaceutical Panel* acknowledged, not the role of dispute settlement to forge such consensus.[122]

The German approach is, however, likely to encounter a serious challenge under Article 27(1), which requires that patents be enjoyable 'without discrimination … as to the field of technology.' The German law limits scope (or limits patentees to process patents) only when the invention is in the field of genomics. In a previous article, we suggested that differential treatment of patentable subject matter does not always arise to a violation of Article 27. In particular, we said that a claim based on disparate treatment required proof of discriminatory intent and could be rebutted by demonstrating a legitimate purpose.[123] In this case, however, the discrimination is *de jure*; there is doubt as to whether in such cases, a member state can still defend its differential treatment successfully.

Of course, it might be argued that Article 27's antidiscrimination provision applies only to the question of patentable subject matter, and not to other aspects of patent law, such as scope. There is contrary authority in the *Canada-Pharmaceutical Products* case, where a panel viewed Article 27 as structural, applying it formalistically to an exception otherwise compliant with Article 30. We took a dim view of that result, suggesting that Article 30 alone defined the conditions under which exceptions were permissible.[124] But the argument for applying Article 27 to other provisions of TRIPS is more persuasive when addressing questions of rights. These provisions could be regarded as elaborating on the basic availability of patents; in contrast Article 30 is about conditions under which member states can derogate from those rights. Furthermore, Article 30 specifies that exceptions must be limited, which

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120. *See* Dreyfuss and Lowenfeld, *supra* note 115, at p. 305.
121. *See*, e.g., *Nash v. CBS, Inc*., 899 F.2d 1537, 1541 (7th Cir. 1990). *See also Eldred v. Ashcroft*, 537 U.S. 186, 207 n. 15 (2002), noting how hard it is to determine what is fair compensation or income necessary to finance particular creative enterprises; *Sony Corp. v. Universal City Studios, Inc*., 464 U.S. 417, 431 (1984).
122. *See* Canada-Pharmaceutical Products, *supra* note 98.
123. Dinwoodie and Dreyfuss, *supra* note 1 [JIEL], at p. 436.
124. Id., at p. 443.

is somewhat inconsistent with a requirement of technological neutrality. No such textual inconsistency is evident when Article 27 is superimposed on Article 28.

c. *Condemnation*. In its recent study of the patent system, the National Academies' Committee on Intellectual Property Rights in the Knowledge-Based Economy suggested that if the real problem is the risk that patentees will block valuable research opportunities, one solution is to use the government's authority to condemn property for public use. In the United States, this could (almost) be accomplished administratively because there is already statutory authority for the government to provide authorization and consent to a government contractor to utilize patented technology.[125] Thus, agencies funding research could simply declare the recipients of the funding to be government contractors, authorized to utilize patented inventions without permission of the patentee.[126]

Because the Constitution prohibits takings without just compensation,[127] patentees would have a right to be paid. However, under the statute, there is no right to injunctive relief. Further, the right to be paid is vindicated against the *United States*, not the party utilizing the invention; such actions are brought in the United States Court of Federal Claims. As the Committee points out, these payments are limited to 'reasonable costs and fees' (which, they hint, is below market rates). Relief does not include punitive awards (such as the treble damages that are ordinarily recoverable for willful infringement).

There are clear disadvantages to relying on this approach. It would protect only researchers whose work is funded by the federal government; it could not be used by other researchers, even if they are engaged in work of high social value. Moreover, if the Committee is right that compensation is at a below-market rate, the availability of this immunity could reduce patent value. Condemnation also has distributive consequences. Those with a taste for cutting edge technology can indulge their preferences cheaply because taxpayers – including taxpayers uninterested in innovation – pay the costs of the researcher's inputs.[128]

On the other hand, there are also some clear advantages. While it is true that only federal government researchers would benefit, the government funds a great deal of work, much of it of high social value, such as military defense research and medical research. The government also tends to award its money based on objective indicia of merit, such as competitive bidding or peer review. Much of the work accomplished on such projects have spillover benefits for other research, sometimes

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125. 28 U.S.C. § 1498.
126. A similar approach is being suggested in the United Kingdom, *see* Public Health Genetics Unit (UK), W.R. Cornish, M. Llewelyn, and M. Adcock, *Intellectual Property Rights (IPRs) and Genetics* Cambridge, Cambridge Genetics Knowledge Park, 2003, at p. 24, available at: <www.phgu.org.uk/about_phgu/resources/word/s-ipr1.doc> (suggesting an enhanced role for Crown Use of patented materials).
127. US Constitution, Amend. V.
128. This approach could also have consequences unrelated to innovation issues, such as for the government's tort liability.

even for work that is rather far afield. Thus, more taxpayers may be benefiting than one might suppose. Or to put it another way, if there is reason for the government to underwrite the primary research costs, that same justification would favor funding the use of the patented inventions needed to accomplish that research. And although patentees may not be awarded a market return from the Court of Federal Claims, they would still collect more than they would under certain of the fair use regimes that are also under consideration.[129]

It is also worth noting that because of the way that the Supreme Court interprets the Eleventh Amendment, researchers at state universities already enjoy limited immunity from monetary damages.[130] Although they can presumably be sued for injunctive relief,[131] some work requires only a single use of a patented technology. Thus, there is already some capacity within the system for research to be accomplished without authorization. The Academies' recommendation essentially expands on the Supreme Court's approach, but does so in a context in which the patentee's right to compensation is clear. And it creates a more level playing field among academics.

Although the TRIPS compatibility of immunity for states has been debated,[132] whether this approach is a violation has not been considered by WTO panels. Articles 30 and 31 establish basic rules for when national law may create an exception to the exclusive rights of the patentee. Article 30 provides that exceptions from liability for patent infringement are permissible if they (a) are limited, (b) do not unreasonably conflict with a normal exploitation of a patent, and (c) do not unreasonably prejudice the legitimate interests of the patent owner, taking account of the legitimate interests of third parties. Although an argument could be made that this provision would support condemnation,[133] the Academies' proposal contemplates a level of use that likely exceeds the limitations allowed.

Article 31, which is explicitly applicable to 'use by the government or third parties authorized by the government,' is thus the more likely focus of analysis. That provision addresses in great detail the circumstances in which a member state may subject patentees to compulsory licenses and the conditions that must be included in such licenses. It has not, however, been the subject of authoritative interpretation by a WTO panel or the Appellate Body. A significant discussion of the limits and constraints of Article 31 have played out in the debate over access to essential

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129. *See*, e.g., M.A. O'Rourke, 'Toward a Doctrine of Fair Use in Patent Law', 100 *Columbia L. Rev*. 1177-1250 (2000), at p. 1205; *see generally*, R. Dreyfuss, 'Varying the Course in Patenting Genetic Material: A Counter-Proposal to Richard Epstein's Steady Course', in F. Scott Kieff (ed.), *Perspectives on Properties of The Human Genome Project*, San Diego, Elsevier 2003, Coll. Advances in Genetics 50, at p. 195.
130. *Florida Prepaid Postsecondary Education Expense Board v. College Savings Bank*, 527 U.S. 627 (1999); *College Savings Bank v. Florida Prepaid Postsecondary Education Expense Board*, 527 U.S. 666 (1999).
131. *Ex parte Young*, 209 U.S. 123 (1908).
132. *See*, e.g., <www.uspto.gov/web/offices/com/speeches/00-20.htm> (announcing consideration of the *Florida Prepaid* case by the US Patent and Trademark Office in a conference in 2000).
133. Dinwoodie and Dreyfuss, *supra* note 1 [JIEL].

medicines, which found political expression in the Doha Declaration.[134] While the need for this Declaration highlights the uncertainty surrounding the application of Article 31, none of the principles articulated in it are helpful in applying the Article in this context.

Looking at the bare text of the Articles, Eleventh Amendment immunity would appear to put the United States in a position of some vulnerability with respect to TRIPS compliance.[135] The Academies' proposal, because it offers some compensation to patentees, has more potential to pass muster. It could easily be amended to conform to other requirements, such as the obligation (absent national emergency) to first seek privately negotiated licenses.[136] But in the final analysis, it might not be possible to craft a solution that fits with all the conditions of Article 31. For example, subsection (a) requires case-by-case determinations. But part of the Academies' goal is to reduce transaction costs; determining each situation on its own merits would undermine that objective.

However vulnerable condemnation looks as against the text of Article 31, it is another question whether it is inconsistent with the policy purposes of TRIPS. In this connection, it is important to note that the TRIPS Agreement was not adopted in a trade or broader international law vacuum. International law arguments drawn from the Universal Declaration of Human Rights,[137] the Convention on Biological Diversity,[138] and international intellectual property agreements outside the scope of WTO dispute settlement,[139] should inform the analysis of Articles 30-31, and it is upon those arguments that the United States might have to rely to sustain statutory reform along the lines suggested by the Academies' Report.[140]

The condemnation proposal has the capacity to ameliorate some of the conditions that have threatened the domain of accessible knowledge. And, more broadly, the long-term credibility of the international intellectual property system depends in part upon its flexibility in allowing member states to fashion a balance of private and public rights in ways that accommodate its own social and economic structure. That structure has an institutional component, reflecting varied national choices as to the respective roles of private industry, the academy, and the government. When

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134. *See* Doha Declaration, *supra* note 99.
135. *See generally*: M.N. Berman, R.A. Reese, and E.A. Young, 'State Accountability for Violations of Intellectual Property Rights: How to "Fix" Florida Prepaid (and How Not To)', 79 *Tex. L. Rev.* 1037-1197 (2001).
136. *See*: TRIPS Agreement, *supra* note 1, Art. 31(b).
137. *See*: The Universal Declaration of Human Rights**,** G.A. res. 217A (III), U.N. Doc A/810 at 71 (1948)
138. *See*: Convention on Biological Diversity, June 5, 1992, U.N. Doc. UNEP/Bio.Div./N7-INC5/4, 31 *I.L.M*. 818 (1992); *see also*: The Convention on Biological Diversity and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs): Relationships and Synergies, Conference of the Parties to the Convention on Biological Diversity, Third Meeting, Buenos Aires, Argentina, Nov. 4-15, 1996.
139. *See*: WIPO Copyright Treaty, Dec. 20, 1996, 36 *I.L.M*. 65 (1997).
140. WTO panels have on occasion been willing to look to ancillary international law to assist in the interpretation of the WTO Agreements, including in TRIPS Disputes. *See*: United States–Section 110(5), *supra* note 93.

the government is funding inventions, the devices by which those inventions reach and enrich the public domain might understandably differ from the devices that are appropriate for private industry. Interpretations that constrained member states to adopt a single mix of these institutional variables, by imposing a uniform set of constraints without regard to institutional context, would affect international political reform of a much more intrusive nature than contemplated by TRIPS negotiators. Of course, the TRIPS Agreement does not draw this distinction – indeed, Article 31's explicit application to government use essentially assimilates government and private enterprises.[141] But we believe that the text of the Agreement must be infused by the general philosophy, also stated in the Agreement, that member states must have the flexibility to implement the agreement consistent with domestic political and economic structures.[142]

3. MAPPING THE INTERNATIONAL DOMAIN OF ACCESSIBLE KNOWLEDGE

Part 2 discussed a variety of adaptations of patent law that might be made in order better to protect and develop the domain of accessible knowledge. In that Part, we attended both to the merits of different proposals and to their compatibility with international obligations. In effect, we have followed Pamela Samuelson's lead, but we are drawing two maps of the domain of accessible knowledge – one under national law; the other under international law. Overlaying our two mappings identifies the points at which international law constrains member states from *extending* the borders of public space. Thus, we saw a depressing disconnect between the reforms best suited to achieving the intrinsic goals of patent law and the likelihood of those reforms being TRIPS-compliant. If members of the WTO are to create an effective public domain, they will need to loosen the restraints at the international frontier, and thus to allow national buttressing of the public domain. Our aggressive interpretations of the TRIPS Agreement are efforts in that direction. But states may also want to redraw the international map more radically, to use it to constrain member states from *invading* the borders of public space.

Each of the approaches to protecting the public domain analyzed in Part 2 revealed an obstacle that international law imposes; an obstacle that must be overcome if states are to have the latitude they need to protect public interests. First, the availability of a procedure for lodging disputes, while an important innovation of the TRIPS Agreement, is making the threat of challenge *too* credible, chilling national attempts to keep their laws responsive to changing technology. Second, the Agreement is interpreted formalistically, creating obligations that may not have been intended by the member states. Third, the Agreement – and decisions interpreting it – lack

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141. *See* D. Gervais, *The TRIPS Agreement: Drafting History and Analysis*, London, Sweet & Maxwell, 1998, pp. 242, 250 n. 9.

142. *See* TRIPS Agreement, *supra* note 1, Art. 1(1); Gervais, *supra* note 141, at 92; India-Patent Protection, *supra* note 98. *See also* Canada-Pharmaceutical Products, *supra* note 98.

normative content, making it difficult for member states to ground arguments for protecting public access.

The first problem was demonstrated in our discussion of non-obviousness. Raising the inventive step ought to be easy, especially if it restores pre-TRIPS thresholds of protection. However, a country seeking to make such a move is likely to encounter resistance from pro-patent interests, claiming that the change would violate the TRIPS Agreement. Such a move could be made presumptively valid, but offering such a presumption might lend itself to abuse by countries seeking to deny patent protection altogether. Thus, we suggested that the TRIPS Council adopt conditions for bringing non-violation complaints that would raise the threshold for challenging certain adjustments to the level of protection. By requiring the complainant to establish elements (such as intent), which are absent in the context of violation complaints, member states would gain breathing room to experiment.[143]

Our examination of patent scope showed the disjuncture produced by formalism. We saw that the American approach to narrowing patent claims is probably unobjectionable under TRIPS, while the German provision – which is likely to work better as a matter of patent policy – is extremely vulnerable to challenge. The discordance is produced by the way in which the requirement of technological neutrality is assessed, which is wholly out of step with the way states actually apply their laws. That is, although domestic patent laws read trans-substantively (in that the same terminology typically applies to all fields), many of the provisions are malleable. Treated empirically, 'the person with ordinary skill in the art' clearly results in field-to-field or state-to-state differences; arguably, it is sometimes also regarded as a term of art, in which case it is explicitly interpreted to pursue technology-specific goals. To allow states to maintain these traditions, the formalism of Article 27 must be relinquished in favor of an interpretation that permits states to justify actions that distinguish among fields. For example, Germany should be allowed to counter a challenge to its special treatment of gene sequences by demonstrating why narrowing scope is uniquely necessary in biotechnology. Alternatively, the antidiscrimination principle should be read as confined to the core focus of Article 27 (patentable subject matter), leaving Germany's provision to be assessed solely under Article 28 (scope).

The normative vacuum can be discerned in the analysis of condemnation. Admittedly, Article 31 of TRIPS is intended to regulate national condemnation of patent rights. However, the scope of discretion left to member states is ambiguous and insufficient. Our exploration of the National Academies' proposal demonstrated as much; the rigidity of Article 31 is equally evident in the post-TRIPS debate over access to essential medicines.[144] In part, the problem is, once again, procedural inflexibility (case-by-case determinations are not, for example, always feasible). But the suffocating detail of Article 31 is also evidence of the framers' lack of

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143. *See supra* text accompanying notes p. 114.

144. Doha Declaration, *supra* note 99. In the case of essential medicines, the core problem was subsection (f), which only allowed member states to authorize manufacture for domestic use, which failed to address the needs of countries that lacked manufacturing capacity.

foresight. The provision leaves states unable to address new problems because the text of the Article provides little guidance on when it is reasonable for governments to intervene. And while Article 30 also permits a state to enact exceptions to rights, and even uses terms like 'normal' and 'unreasonable,' our previous work showed that decision-makers are not evaluating challenges from a normative perspective, even when invited to do so.[145] The Doha Declaration provides a template for reconfiguring these provisions because it recognizes the need for flexibility and explicitly refers to 'public international law.' Thus, it provides a basis for using a rich set of principles to justify actions that preserve the public domain in the face of technological change.

But even if the constraints of international law are lifted or loosened, it can be argued that international intellectual property law should be framed to do more, that it should be viewed not only as an obstacle to be overcome, but also as an affirmative protection of the public domain against encroachments by member states. In fact, there is a basis for such efforts in the TRIPS Agreement: Article 7 takes account of *both* the producers and users of technological knowledge and seeks a *balance* of rights and obligations, while Article 8 specifically invokes the public interest, including health and nutrition, as objectives to be pursued in formulating national laws. However, these provisions have not received much attention.[146] Indeed, the *Canada-Pharmaceutical Products* Panel warned against resort to these articles, on the theory that their use would alter the deal struck in the Uruguay Round.[147] The Panel apparently missed the point that the core function of intellectual property law is to pursue a balance of interests.

Thus, while it may be true that scientists have long appreciated that the public domain is more than a place where old intellectual property goes to die, they need to impress their views on international patent scholars and lawmakers. Indeed, advocates would do well to draw on the developing discourse in copyright, which has placed the value of a strong public domain at the center of the debate. Rooting protection in the affirmative case would accomplish several goals. TRIPS adjudicators might more readily resort to broader principles of international law and intellectual property theory, including the 'Objectives' and 'Principles' of the Agreement laid out in Articles 7 and 8. More important, borrowing the terms of the commodification debate in copyright and articulating a positive case for access interests would reframe the next round of TRIPS negotiations. It would provide a theoretical basis for constructing an *internationally* accessible domain of knowledge.

In essence, this move would entail development of what we have separately called 'substantive maxima' or 'users' rights.'[148] The seeds for such a shift can be found

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145. Dinwoodie and Dreyfuss, *supra* note 1 [JIEL], at pp. 438-43.
146. Although the panels have given little weight to Articles 7-8, the Doha Declaration however suggests that they might have a greater vitality.
147. Canada-Pharmaceutical Products, *supra* note 98, § 7.26.
148. G.B. Dinwoodie, 'Federalized Functionalism: The Future of Design Protection in the European Union', 24 *Am. Intell. Prop'y L. Ass'n Q. J.* 611 (1996), 715 n. 274; R. Cooper Dreyfuss, 'TRIPS-Round II: Should Users Strike Back?', 71 *U. Chi. L. Rev.* 21-35 (2004).

in a variety of existing international sources. Article 2(8) of the Berne Convention provides that 'the protection of this Convention shall not apply news of the day or to miscellaneous facts having the character of mere items of press information;' Article 5(1) of the Information Society Directive mandates an exception for ephemeral copies; and Article 5 of the Software Directive requires states of the EU to permit decompilation of a program to obtain interoperability information. Extrapolating these examples into a general philosophy of user rights would bring international intellectual property law full circle and secure to the public protection that mirrors the rights that innovators enjoy under the Berne and Paris Conventions.

4. CONCLUSION

The public domain of science is likely shrinking, but more through the effects of technological change than through legal efforts to privatize culture. International law heavily circumscribes the capacity to redraw the public/private boundaries in ways that ensure an optimal public domain. Scholars might thus view international law as an obstacle around which national patent policymakers must navigate. But the function of international intellectual property law should be conceptualized more broadly. Informed by the value of a strong domain of accessible knowledge, international law could help member states resist scientific and technological commodification.

Chapter X

Property and Privacy: European Perspectives and the Commodification of our Identity

Corien Prins

1. INTRODUCTION

The central theme of this contribution can be aptly illustrated by the following outcry by Steve Mann:

> 'Many hotel owners, restaurant owners, and various others are thieves. What they steal is not your car or your wallet, but, rather, your soul. Very much like intellectual property thieves, what they steal is information rather than material objects. What they are stealing is Humanistic Property. Humanistic Property is that which we give without conscious thought or effort, and differs from Intellectual Property which is what we consciously produce for the purpose of disclose to other people. (…) I'm not talking about an abstract concept called 'privacy'. After all, many officials seem to believe privacy is just a myth, and has no place in our utilitarian world. Many lawmakers seem to be more concerned with keeping the trains running on time and keeping crime low than with abstract humanistic concepts like privacy. I'm talking here about something a lot more concrete than violation of 'privacy' – I'm talking about *Theft!*'[1]

In his characterization of personal data as wealth that can be 'stolen' by 'thieves' and the claim that individuals should be given effective instruments to protect themselves against usurpation of the assets that they have in their own individual data, Steve

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1. S. Mann, 'Computer Architectures for Protection of Personal Informatic Property: Putting Pirates, Pigs, and Rapists in Perspective', *First Monday*, volume 5, number 7 (July 2000). Available at: <firstmonday.org/issues/issue5_7/mann/index.html>

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 223–257

Mann does not stand alone. During the past decade, many commentators and several organizations (among them the American Civil Liberties Union and the Electronic Frontier Federation[2]) have argued that individuals should receive fair compensation for the use of their personal data: 'There should be no free lunch when it comes to invading privacy.'[3] They feel that, given protection of personal data is expensive and in short supply, whereas the collection and use of personal data is wasteful and inefficient, we should consider market-oriented mechanisms based on individual ownership of personal data.[4] In the end, if markets were allowed to function more effectively, there would be less privacy invasion.[5] In proposing a property rights approach, Laudon argued that courts have recognized celebrities' claims to a property interest in their name and fame to seek compensation whenever such an image is used for a commercial purpose. Why not extend such a property interest to the personal data of ordinary individuals?[6] For, with the advent of digital technologies, hasn't personal data of us all become an asset that is worth real money?

This contribution aims to analyze the appeal, benefits and limitations of the commercial appropriation of privacy, or more specifically personal data, from a European perspective. It will discuss and analyze a highly market-oriented argument suggested to resolve the current problems in respect of personal data protection in our digital world: vesting a property right in personal data. Does our present society – in which personal data are considered a commercially valuable asset – indeed imply that we must consider protection instruments that are based on a market-oriented rationale?

Many of the arguments that have been forwarded in favor of a proprietary perspective on protection mechanisms derive from American sources. There has been relatively little discussion outside the United States of whether such a perspective and approach could resolve the pressing problems of personal data protection – a fact that is not entirely surprising, given the European human rights-oriented approach to privacy protection. This contribution aims to add European perspectives to the debate. It will show that although it is all too often argued that the creation of a property right is not in line with the human rights-based approach to privacy, the European system appears to offer considerable leeway for a property rights model. There are certainly openings under European law for a utilitarian perspective on personal data protection and it could even be argued that the European data protection system is more receptive towards a property approach than the American system. But the analysis will also show that although vesting a property right in personal data may have some appeal, albeit for rhetorical purposes, doubts rise about whether such an

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2. On the campaigns of both organizations, *see*: J. Litman, 'Information Privacy/Information Property', 52 *Stanford Law Review* 1283-1313 (2000), p. 1290.
3. K.C. Laudon, 'Markets and Privacy', 39 *Communications of the ACM* 92-104 (1996), at p. 103.
4. Laudon 1996, *supra* note 3, p. 93.
5. Id., p. 103.
6. Id., p. 102; *See also*: A. Bartow, 'Our Data, Ourselves: Privacy, Propertization, and Gender', 34 *University of San Francisco Law Review* 633-704 (2000), at p. 695.

approach will offer the claimed prospects of achieving a higher level of personal data protection. Specifically, the final intent of this contribution is to show that the property argument fails to recognize the data protection challenges that arise with present-day developments in the area of context-aware computing. I will argue that in a society in which our behavior and identities (i.e. not individual data as such), become the object of commodification, the debate on data protection mechanisms must be structured along lines of control and visibility, rather than ownership. This then will require a debate on the role of the public domain in providing the necessary instruments that will allow us to know and to control how our behavior, interests and social and cultural identities are 'created'.

The next section will first briefly sketch how increasing attention has been given to utilitarian considerations in the debate about privacy and more specifically personal data protection (section 2). Subsequently, section 3 will show that although our present-day legal system does not expressly recognize a property right in personal data, this is in no way mirrored in the practice of the on-line world. Section 4 then turns to the claimed benefits of vesting a property right in personal data, followed in section 5 by an analysis of the often-heard argument that vesting property rights sits uneasily with a human-rights approach towards privacy protection. This section also locates the discussion in the broader framework of property and human rights, i.e. by discussing the issue of property and privacy in both commercial aspects of personality and the human body. We will see that, as regards these, new commercial practices challenge legal doctrine as well as the courts to think about the ways in which private property and human rights can be balanced. Section 5 also addresses the question of the extent to which individuals are allowed to waive the protection of their fundamental rights by means of a contract. For creating property rights assumes that private ordering and commercial arrangements determine the position of the respective parties. Section 6 subsequently addresses the position of a property perspective under the European Directive on personal data protection. It will show that this regime has given individuals certain instruments of control and power over their personal data. At least in a commercial setting, a property approach thus does not appear to be such a strange phenomenon under the European data protection regime after all. While vesting a property right in personal data may indeed have some appeal, albeit for rhetorical purposes, the obvious question is what the consequences of this approach would be. Section 7 analyzes whether such an approach would indeed offer the claimed prospects of achieving a higher level of personal data protection, followed by a discussion in section 8 of the costs that may arise if property rights were to be vested in individuals. Section 9 then turns to possible concerns about the commodification of personal data in relation to the public domain: to what extent, and how would establishing a property right in personal data affect the interests of the public domain? Moreover, this section argues that developments in the area of 'pervasive' computing and the subsequent trend toward a commodification of our identities and behavior necessitate a debate on the role of the public domain in providing the necessary instruments to know and to control the ways in which our identities are created and shaped.

2. BACKGROUND

A look at our contemporary, data-based society reveals that information about people is essential for a variety of economically and socially useful and crucial purposes: education, taxation, social benefits, health care, crime detection and terrorism prevention, commerce and marketing, to name but a few. The incentives for companies and organizations to process personal data are high: information means money as well as power. Moreover, advances in technology have provided almost everyone with low-threshold facilities to collect and use information: the technical infrastructure of the Internet combined with profiling techniques and other advanced processing applications make it easy and cheap to collect, combine and use enormous amounts of data. Whether it is for commercial, economic, political or technological reasons, the present-day dealings with personal data turn our society more and more into a privacy-unfriendly environment.[7]

In contrast to other legal domains – such as that of intellectual property rights and consumer protection – individuals have been given very few instruments to address the problems and challenges brought on by new information technologies. Only a handful of specific legislative measures have provided individuals with means to combat the invasion of their privacy rights brought on by new information technologies. Moreover, a glance at both the common law and civil law system shows that, despite constitutional recognition, and numerous interpretative cases, as well as detailed laws covering the processing of personal data, in day-to-day practice privacy appears not at all protected under our legal system. Whereas various international and national legislative measures have made copy*right* evolve towards a strong property-based instrument, privacy*right* has remained no more than the set of rules governing fair information practices as developed during the 1970s by e.g. the Organization for Economic Cooperation and Development (OECD) and laid down in regimes such as Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data of the Council of Europe.[8] A crucial difference, of course, is that stakeholders in the domain of intellectual property rights appear to have a rather direct economic and financial interest by which to measure and justify the scope of legal protection to insist upon, whereas economic interests and financial damages are difficult arguments to employ when it comes to discussing the rationale and actual amount of privacy protection.[9]

Nevertheless, some – mostly American – commentators have argued that it is exactly in the area of utilitarian considerations that the arguments and instruments to

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7. Or, as simply put by D. Leenheer Zimmerman: 'My life is your data'. D. Leenheer Zimmerman, 'Fitting Publicity Rights into Intellectual Property Law and Free Speech Theory: Sam, You Made the Pants Too Long!', 10 *DePaul Art & Entertainment Law Journal* 283-313 (2000). Available at: <papers.ssrn.com/paper.taf?abstract_id=211789>
8. Council of Europe, ETS No. 108, Strasbourg, 28 January 1981.
9. *See* on this in more detail: J. Zittrain, 'What the Publisher Can Teach the Patient: Intellectual Property and Privacy in an Era of Trusted Privication', 52 *Stanford Law Review* 1201-1250 (2000), p.1201.

enhance the level of personal data protection must be sought: 'Property talk would give privacy rhetoric added support within American culture. If you could get people (in America, at this point in history) to see certain resource as property, then you are 90 percent to your protective goal.'[10] Given that data about individuals have become a key commercial asset for businesses and other organizations, individuals must be given an instrument that would enable them to negotiate and bargain over the use of their data. If, as Ann Bartow observed, 'the rigid commodification of information is indeed inevitable, perhaps it is time for individuals to appropriate the intellectual property framework so eagerly constructed by corporate interests, and to seek control of the data we generate and a share of the proceeds this information produces. We must assert proprietary interests in ourselves and hoist consumer data merchants by their own cyber-petards. We must definitively establish that consumer information is intellectual property that belongs to the consumers themselves.'[11] And: 'Perhaps we should have the same property rights in our names and personal information that corporations have in their names and data.'[12]

In brief, the proponents of a proprietary approach towards personal data protection argue that the commercial appropriation of personal data implies and requires the law to grant individuals a property right in their personal data. Moreover, creating stronger property rights is often thought to be a plausible way of securing interests in our modern era of cyberspace. The intellectual property rights domain is a perfect example of an area where the appeal of stronger rights has gained considerable ground: legislatures have increasingly been creating new forms of private property rights. Also, our present-day society evolves more and more towards an environment in which protection mechanisms based on private instruments gain priority.[13]

At first sight, privacy and property seem mutually exclusive concepts. For privacy relates to much more than just protecting personal interests: it is also about broader interests such as human dignity and fundamental freedoms.[14] Some, however, argue that privacy protection on the one hand, and personal data protection on the other, have evolved into two highly distinct concepts, whereby personal data protection nowadays has nothing to do with fundamental freedoms. Instead, it is

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10. L. Lessig, 'Privacy as Property', 69 *Social Research* 247-270 (2002), p. 255.
11. Bartow 2000, *supra* note 6, p. 685.
12. Id., p. 634.
13. *See*: M.J. Radin, and R. Polk Wagner, 'The Myth of Private Ordering: Rediscovering Legal Realism in Cyberspace', 73 *Chicago-Kent Law Review* 1295-1317 (1998); L.M.C.R. Guibault, *Copyright Limitations and Contracts. An Analysis of the Contractual Overridability of Limitations on Copyright*, The Hague, Kluwer Law International, 2002; B.M.J. van Klink, and J.E.J. Prins, *Law and Regulation: Scenarios for the Information Age*, Amsterdam: IOS Press 2002; M.A. Lemley, 'Private Property', 52 *Stanford Law Review* 1545-1557 (2000). *See also* the Property Regulation in European Science, Ethics and Law Project at the University of Birmingham <www.propeur.bham.ac.uk>
14. 'By translating the different aspects of privacy in subjective (personality) rights, individual freedom is forcibly encroached upon.' S. Gutwirth, *Privacy and the Information Age*, Lanham, Rowman & Littlefield, 2002, p. 40.

all about controlling information power.[15] Recently, the supporters of this position have been given an additional argument with the separate listing of both rights in the European Charter on Fundamental Rights (articles 7 and 8). Moreover, when turning our attention to the practice of the on-line world, a conceptualization of privacy as a fundamental right that cannot be alienated appears a very far-fetched scenario. Individuals make deals for the disclosure, collection, use and reuse of their personal data, in certain situations receive some form of compensation (which may vary according to the type of data as well as use), and thus 'exploit' and 'sell' their habits, use-profile and individual data.

3. PRIVACY AND PROPERTY: 'OWNERSHIP' MODELS ON THE INTERNET

Early in 2001, a judge in Massachusetts, United States, approved a proposal by an Internet retailer specialized in the sale of toys, Toysmart, to destroy a list with names and other details of the retailer's 250,000 customers (names, addresses, transaction details, and e-mail addresses). The customer list had become the subject of a dispute between the company and the US Federal Trade Commission when the Internet company, having gone bankrupt, advertised the sale of its customer list and database in *The Wall Street Journal* to the highest bidder. The customer data turned out to be the only hope for the many creditors, because it was the sole asset that still had any value. The troublesome issue, however, was that in its privacy policy, Toysmart had promised not to disclose the customers' personal data to third parties. At first instance, the FTC reached an agreement with the on-line retailer that would allow the company to sell the customer list to a similar company that was prepared to honor the privacy commitment. However, consumers and privacy-activists became concerned about where the data would eventually end up, and a Bankruptcy court had to decide whether the data could be sold. To end the negative publicity, a subsidiary of Walt Disney Co. (which owned 60% of Toysmart) offered $50,000 to 'buy and destroy' the list. Finally, the judge ordered that the payment should be made but that the list should not be transferred to Disney, and should instead be destroyed by Toysmart.[16]

The Toysmart example is far from unique. In recent years, with a downturn in the e-business, many companies decided to sell their customer data as a means of generating cash flow and silencing creditors. In many other situations, customer lists and databases appeared a highly valuable asset as well. Large amounts of personal data changed hands or 'ownership', as part of merger-acquisitions, reorganizations

15. P. Blok, *Het recht op privacy (The right to privacy)*, The Hague, Boom Juridische Uitgevers 2002, p. 326.
16. For details on this story *see*: L. Enos, 'Deal Afoot to Destroy Toysmart Database', *E-Commerce Times*, January 10, 2001. Available at: <www.ecommercetimes.com/perl/story/6607.html>.

and other strategic company movements.[17] The 2001 takeover by the American company eBay of the French auction sales operator iBazar is but one example of what is at stake when it comes to the acquisition of subscriber, user and customer lists.[18] Another illustration of this trend is a statement in the privacy policy of Google's highly-debated initiative to offer e-mail with more storage space in exchange for viewing advertisements that are targeted following a scan of key words in e-mail messages: 'We reserve the right to transfer your personal information in the event of a transfer of ownership of Google, such as acquisition by or merger with another company.'[19]

And there is more to come. With the growing importance of various so-called personalization services, it is clear that ownership rights in personal data and individual user profiles become the key instrument in realizing returns on the investment.[20] Who owns and controls the profiles, patterns and the data that are behind these patterns? Who owns your personal Yahoo-profile or our future Google Gmail profile? An October 2003 Jupiter Research study found that to develop and deploy a personalized website can reach four or more times the cost of operating a comparable dynamic website[21]. A healthy business model for personalized services would thus appear to require that the key asset, i.e. the personalized information, 'belongs' to the organization that has configured its system to allow users to perform personalization.[22]

If the answer to the ownership dilemma is up to the businesses that provide personalized services, then it is their data. Companies may even believe that they have ownership rights in the personal data compilations because the law itself offers several indications that this is indeed the case. In addition to the protection granted by means of the trade secrets regime, businesses that have invested in the collection

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17. *See*: S. Gauthronet, 'The Future of Personal Data in the Framework of Company Reorganisations', *23rd International Conference of Data Protection Commissioners*, Paris, September 2001.
18. Gauthronet, *supra* note 17.
19. <gmail.google.com/gmail/help/privacy.html>
20. Illustrative are the so-called recommender systems that enable personalization by presenting to the user a list of items (content, services, products, etc.) in which he or she might be interested, based on what the system knows about the user. The system automatically makes the appropriate choices for the customer based on input about his tastes and interests. In addition, the system predicts, by means of scores for items, which product or service the user might find most interesting. Thus, a recommender might notice a pattern of searching and purchasing behavior across health-related sites that suggests that the user has a certain disease. So-called third party recommenders aggregate customer data across many websites by tracking activity across many websites and drawing conclusions (purchase patterns and profiles) about the customers that no individual website could draw. For more detail on recommender systems and how they work, *see*: B. Miller, J. Konstan, and J. Riedl, 'PocketLens: Toward a Personal Recommender System', 22 *ACM Transactions on Information Systems* 437-476 (2004).
21. *Beyond the Personalisation Myth: Cost-effective Alternatives to Influence Intent*, Jupiter Research Corporation, 30 September 2003, 26p.
22. For more detail on developments in the area of personalization, *see*: A.M.B. Lips, S. van der Hof, J.E.J. Prins, A.A.P. Schudelaro, *Issues of Online Personalisation in Public and Commercial Service Delivery* (Wolf Legal Publishers, 2005).

and compilation of personal data are granted exclusive rights under the European Directive on database protection.[23] Another illustrative indication may be found in section 55 of the UK Data Protection Act, which provides for a criminal sanction for stealing personal data from the *data controller* (i.e. not the data subject).

Hence, while the academic world may comment that the relevant legal regimes do not imply that personal data can be cast as a property right, present-day practice in the on-line world has evolved completely differently. Here information (including personal data) is seen as a commodity that can be traded against a discount in the virtual supermarket or some other benefit, such as access to a certain on-line service. Information generated by means of consumer behavior and transactions on the Internet is tracked, recorded and correlated with other sources. Data marketers and other commercial organizations invest heavily in data processing techniques, because it is worth the money and risk. Anyone with access to information, anyone who has collected personal data, can use it freely and, what is more, subsequently sell it to third parties for lucrative amounts of money.

Consumers react to this practice in different ways (some find it chilling, others do not care at all).[24] And although some try to protect their privacy by applying techniques to 'hide' their data, actual and effective transparency and control seems unattainable. For individual consumers it is no longer possible to really find out what happens to their personal data, let alone to effectively control the dealings with these data. As a result, many individuals understandably try to gain as many benefits as possible from what is left of their privacy. To them, the only workable solution appears to be to 'sell' their personal data. One example of such a benefit is offered by the afore-mentioned Google Gmail initiative: it offers greater storage space in return for having Google monitor e-mail and use the information for advertising. Thus, while the academic world argues that privacy is an inalienable right, the real world suggests a completely different picture. This has, as mentioned above, stimulated some commentators to propose a completely different approach: establishing property rights in personal data. But what, then, might be the arguments in favor of such an approach?

4. ESTABLISHING A PROPERTY RIGHT IN PERSONAL DATA

> 'Economically, privacy can be understood as a problem of social cost, where the actions of one agent (e.g., a mailing list broker) impart a negative externality on another agent (e.g., an end consumer). Problems in social cost can be understood by modeling the liabilities, transaction costs and property rights

23. Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, *OJ* 1996 L 077/20.
24. Lundblad argues that we live in a 'noise society', characterized by a high collective expectation of privacy, but a low individual expectation of privacy. N. Lundblad, 'Privacy in a Noise Society', Stockholm, St. Anna Institute, 2004. Available at: <www.sics.se/privacy/wholes2004/papers/lundblad.pdf>

> assigned to various economic agents within the system, and can be resolved by reallocating property rights and liability to different agents as needed to achieve economic equilibrium.'[25]

Social cost is often described as what happens 'when a business does something that has a negative impact on someone else'.[26] A popular example used to illustrate the concept is environmental pollution.[27] Commentators have argued that, 'much like unregulated, polluting factories, businesses collecting large amounts of personal data are able to internalize the gains from using and selling personal data, while externalizing most of the negative impact that results from their practices'.[28] These businesses can often get away with using personal data in ways that consumers would not have freely bargained for.[29] The market has not only failed to discipline businesses that misuse personal data, but has created a systematic incentive for over-disclosure of such data.[30] In other words, the information asymmetry and the resulting high monitoring costs that consumers face leads to over-disclosure of personal data by the businesses that collect these data.[31]

In looking at privacy as a problem of social cost, commentators have argued that the prospects for effective personal data protection may be enhanced by recognizing a property right of such data. They feel that the present conception of privacy is an ineffectual paradigm and that, if we want strong privacy protection, we must replace it with the more powerful instrument of a property right.[32] Such a market-based solution would, as mentioned above, also be in line with today's apparently widely accepted practice, the regulation of on-line behavior by means of private ordering.[33] It is noted that giving individual citizens control in the form of property rights will go a long way towards stimulating competition in the present situation of information asymmetry and market failure. In other words, a key argument of the proponents of a property approach is that present-day developments towards a commodification of personal data require that we vest individuals with some form of property right in data and information about themselves.

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25. P. Sholtz, 'Transaction Costs and the Social Costs of Online Privacy', *First Monday*, volume 6, number 4, May 2001, Available at: <firstmonday.org/issues/issue6_5/sholtz/index.html>
26. Sholtz, *supra* note 25. In describing the concept of social cost, Sholtz uses the work of R. Coase, *The Firm, the Market and the Law: The Nature of the Firm,* Chicago, University of Chicago Press, 1988, pp. 33-56.
27. *See* on this e.g. P. Samuelson, 'Privacy as Intellectual Property', 52 *Stanford Law Review* 1125-1173 (2000), p. 1125; Sholtz, *supra* note 25.
28. Sholtz, *supra* note 25.
29. Id.; and P. Swire, 'Markets, Self-Regulation, and Government Enforcement in the Protection of Personal Information', in US Department of Commerce, *Privacy and Self-Regulation in the Information Age*, Washington D.C., National Telecommunications and Information Administration, 1997, available at: <ssrn.com/abstract=11472>.
30. Swire, *supra* note 29.
31. Sholtz, *supra* note 25.
32. P. Sholtz, 'The Economics of Personal Information Exchange', *First Monday,* volume 5, number 9 (September 2000). Available at: <firstmonday.org/issues/issue5_9/sholtz/>.
33. Lemley, *supra* note 13, p. 1546.

The suggestion that privacy should encompass an enforceable ownership right, which in fact was advocated as early as 1967 by Alan Westin[34] and further analyzed on the basis of law and economics insights by Richard Epstein and Richard Posner[35], has sparked the debate about the opportunities and risks of a 'propertization' of personal data.[36] Proponents of strengthening privacy protection by means of a property right argue that personal data 'belong' to data subjects as 'their' property. Individuals generally have a legal right to be left alone and thus to refrain others from access to their personal data. The concept of privacy protects personal data from unauthorized disclosure and use. As a result, the law that implements this concept must not only provide individuals with 'the sense' that they have some sort of exclusive right,[37] but also actually provide them with an effective tool, i.e. an exclusive right to their personal data.[38]

Some commentators favor granting individuals property rights in their personal data because individuals have clear interests of their own in controlling their personal data and must therefore be given the benefits of the property concept. Vesting a property right would allow individuals to make individualized deals for trading the right to use their personal data against preferential services, money, or other benefits.[39] Another suggested benefit for data subjects is that by vesting a property right in individuals, businesses would be forced to internalize the costs associated with the collection and processing of personal data. At present, businesses gain the full benefit of using personal information, but, as noted above, do not bear the societal costs: personal data can usually be collected for free, and with the advent of new technologies, it has become much easier and cheaper to gather and use data of individuals. Once companies had to internalize the societal costs associated with using personal data, they would perhaps be less inclined to gather and compile personal data than they currently do. This, in turn, would enhance levels of privacy.[40] Moreover, 'placing some cost burden on processors and users of personal data promotes greater respect for individual dignity than requiring individuals to purchase their privacy

34. A.F. Westin, *Privacy and Freedom*, New York, Atheneum Press,1967, pp. 324-325.
35. R.A. Epstein, 'Privacy, Property Rights, and Misrepresentations', 12 *Georgia Law Review* 463-465 (1978); R.A. Posner, 'The Right of Privacy', 12 *Georgia Law Review* 393-422 (1978).
36. Some early contributions to the debate on property, contract rules and privacy are: Laudon, *supra* note 3; M. Cloud, 'The Fourth Amendment During the *Lochner* Era: Privacy, Property, and Liberty in Constitutional Theory', 48 *Stanford Law Review* 555-631 (1995-1996); P. M. Schwartz, 'Privacy and the Economics of Personal Health Care Information', 76 *Texas Law Review* 1-76 (1997); Peter P. Swire, 'Cyberbanking and Privacy: The Contracts Model', San Francisco, *Computers, Freedom & Privacy Conference*, March 1997 available at: <www.peterswire.net/cyber.htm>; P.P. Swire, R.E. Litan, *None of Your Business. World Data Flows, Electronic Commerce, and the European Privacy Directive*, Washington D.C., Brookings Institution Press 1998, pp. 86-87.
37. Samuelson, *supra* note 27, p. 1129.
38. Laudon, *supra* note 3, p. 92.
39. Id., p. 104. *See also* the overview of the arguments presented by P. Samuelson, *supra* note 27, p. 1125.
40. Laudon, *supra* note 3, p. 104.

against a default rule of no-privacy'.[41] Thus, the costs are no longer only borne by those individuals who both desire privacy and can afford it, but instead by society as a whole.[42] Further, it is noted that by vesting an ownership right in personal data it would become expressly clear that such data are owned by the data subject, not by the business that collected them.[43]

Another claim made by the proponents of the property approach is that new advances in technology now make it considerably easier to create and sustain the conditions for individual and personalized choices of data use (such as restrictions on use and third party reuse). As is shown in the area of copyright, technology offers highly attractive means to uphold property rights that were too expensive and burdensome to provide in the past. Several years ago Philip Agre had already described 'technologies of identity' which made it possible to prevent personal data from being collected at all.[44] Several commentators have argued that there is a profound relationship between those who wish to protect intellectual property and those who wish to protect privacy.[45] Their common desire is to protect and control the distribution and use of information. Hence, the efforts of the sound recording and film industry at regaining control by means of technology (e.g. by applying digital rights management systems) offer inspiration, as well as lessons, to those who seek to strengthen and enhance the protection of personal data. Just as the titleholder of a copyrighted work may wish to let users listen, view or read his work a limited number of times, as well as restrict them in sharing the work with others, individuals can monitor the use of their personal data and e.g. limit secondary and broader use of their data.[46] In line with this argument, Cohen contended that 'the same technologies that enable distributed rights-management functionality might enable the creation of privacy protection that travels with data – obviating the need for continual negotiation of terms, but at the same time redistributing 'costs' away from individuals who are data subjects'.[47] Also, academics in the domain of economics have focused on the economic incentives that can justify the development and adoption of privacy enhancing technologies.[48]

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41. J.E. Cohen, 'Examined Lives: Informational Privacy and the Subject as Object', 52 *Stanford Law Review* May 1373-1438 (2000), p. 1390.
42. Cohen, *supra* note 41, p.1390.
43. *See* for an extensive overview of the literature on this: Litman, *supra* note 2, footnote 19; Lemley, *supra* note 13, p. 1545, footnote 5. An interesting overview of publications from both a legal as well as (micro-)economic perspective can also be found on the website 'The Economics of Privacy' maintained by Alessandro Acquisti at: <www.heinz.cmu.edu/~acquisti/economics-privacy.htm>
44. P.E. Agre, 'Beyond the Mirror World: Privacy and the Representational Practices of Computing', in P.E. Agre, and M. Rotenberg (eds.), *Technology and Privacy: The New Landscape*, Cambridge, MIT Press 1997, p. 29.
45. *See* e.g. Zittrain, *supra* note 9.
46. Id.
47. Cohen, *supra* note 41, p. 1391.
48. A. Acquisti, 'Protecting Privacy with Economics: Economic Incentives for Preventive Technologies in Ubiquitous Computing Environments', Workshop on *Socially-informed Design of Privacy-enhancing Solutions*, 4th International Conference on Ubiquitous Computing (UBICOMP

5. PROPERTY RIGHTS AND HUMAN RIGHTS

The proponents of vesting a property right in personal data suggest that we do 'own' our privacy in some sense, that personal data rights are tightly connected with ownership and control and, as such, these rights are alienable: they can be waived or 'sold'. Of course there are those who do not favor property rights in personal data, as will be shown later on in this chapter. But aside from the commentators that have specific points of criticism, there are those who claim at a more fundamental level that such an approach does not have a future in those legal systems that value privacy as a human right.[49] It is argued that securing privacy by means of property rights is indicative of a typical US approach to the matter.[50] Those who are convinced that the concept and rationale of personal data protection should be shaped along the line of property rights, are clearly influenced by the enormous power of property thinking that is so typical of the American legal tradition.[51] In contrast, the European debate on privacy protection would take a human rights perspective on the issue: the concept of (commercial) property may not be vested in privacy because privacy is attached to individuals by virtue of their personhood, and, as such, this right cannot be waived or transferred to others (either for commercial or for other reasons). Also, human rights are conceived as closely linked to constituting and maintaining a person's personal integrity. They are therefore seen as non-commodifiable rights. 'Human rights are rooted in a noncommodified understanding of personhood and the attributes and context necessary to constitute and maintain personhood.'[52] Typical of the human-rights perspective is the idea that privacy is negative in nature: it is viewed as a right of non-interference, not as a right of positive entitlement. The negative, autonomy-based conception merely provides individuals with a right as long as their personal information remains in the private sphere. However, once personal data enter the public sphere, individuals remain largely powerless in determining what further use is made of these data. In brief, the problem with creating property rights in personal data under the European legal system would be that it does not fit the human rights perspective as adopted in, e.g., Article 8(1) of the Rome Convention for the Protection of Human Rights and Fundamental Freedoms, providing that: 'Everyone has the right to respect for his private and family life, his home and his correspondence.' Also, the human rights

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02), Goteborg, Sweden, September 2002. Available at: <guir.berkeley.edu/pubs/ubicomp2002/privacyworkshop/> *See also* various of the publications listed at: <www.heinz.cmu.edu/~acquisti/economics-privacy.htm>

49. *See* Samuelson, *supra* note 27, citing Radin (footnote 93).
50. M.J. Radin, 'Incomplete Commodification in the Computerized World', in Niva Elkin-Koren, Neil Weinstock Netanel (eds.), *The Commodification of Information*, The Hague, Kluwer Law International 2002, pp. 17-18.
51. Cohen, *supra* note 41, p. 1379.
52. Radin, *supra* note 50, p. 17.

dimension was expressly used by the European Parliament as an argument in the debates on the Safe Harbor Principles.[53]

At first glance, it indeed seems a little awkward to bring the property argument into the human rights debate. This, then, may also be the reason why very few European theorists have reflected on the idea of a property right vested in personal data. In the 1980s, Catalat and Poullet elaborated on the matter as part of their search for an explanation of individuals' rights regarding data pertaining to them. In drawing a parallel between personal data protection, a *ius in rem*, and intellectual property rights protection, Catalat defended the thesis that the right of property could be seen as the explanation of the notion of personal data rights[54], whereas Poullet refused to accept this position, arguing that an explanation in terms of the notion of freedom was more appropriate to enlighten the ratio of data protection.[55] More recently, Bygrave briefly touched upon the property rights theme in his 2002 study on the rationale of data protection law.[56] Although he does not expressly decline the property rights option, Bygrave takes a very skeptical position. Interestingly, his hesitations relate to practical problems and not so much to fundamental human-rights related objections.[57] Thus, although some have been critical[58], we may conclude that during the past decades the majority of the theorists stressed that the human rights perspective forms the very essence of the European personality-based ratio of privacy and personal data protection.[59] In this perspective there appears to be little room for a property approach.

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53. European Parliament, Committee on Citizens' Freedoms and Rights, Justice and Home Affairs, *Report on the Draft Commission Decision on the adequacy of the protection provided by the Safe Harbour Privacy Principles*, C5-0280/2000-2000/2144(COS)), 22 June 2000. Available at: <europa.eu.int/comm/internal_market/privacy/docs/adequacy/0117-02_en.pdf >
54. P. Catalat, cited in: Y. Poullet, 'Data Protection between Property and Liberties. A Civil Law Approach', in H.W.K. Kaspersen, A. Oskamp (eds.), *Amongst Friends in Computers and Law. A Collection of Essays in Remembrance of Guy Vandenberghe*, The Hague, Kluwer Law International, 1990, p. 161.
55. Poullet, *supra* note 54, pp. 161-181.
56. L.A. Bygrave, *Data Protection Law. Approaching its Rationale, Logic and Limits*, The Hague, Kluwer Law International, 2002, pp. 120-122.
57. To Bygrave, it is questionable that the adoption of property rights approaches will assist arguments for providing increased levels of data protection, because such rights – like most other rights – are seldom applied in an absolute manner. In addition, he argues that many of the challenges faced by data protection law and policy (among them the ability of data subjects to comprehend the logic of information systems) cannot be adequately addressed under the property rights rubric. Bygrave, *supra* note 56, p. 121.
58. *See* e.g. L. Bergkamp, 'The Privacy Fallacy: Adverse Effects of Europe's Data Protection Policy in an Information-Driven Economy', 18 *Computer Law & Security Report* 31-47 (2002), p. 31.
59. *See* recently: Gutwirth, *supra* note 13, pp. 39-41, arguing that vesting a property right conflicts with the notion that privacy needs to be seen in the perspective of freedom. Moreover: 'The attempts to create an unequivocal subjective right to privacy are implicitly based on the wrong assumption that the law has to and is allowed to impose 'good values'. *See also*: P. de Hert, 'Internet en Privacy' in K. Byttebier, R. Feltkamp, E. Janssens (eds.), *Internet en Recht*. ***Internet***

Nevertheless, there are signs of a greater readiness in several areas of the European legal system to acknowledge the importance of elements of property thinking in the human rights, human dignity and autonomy arena. Illustrative is Article 1 'Protection of Property' of Protocol No. 11 to the Convention for the Protection of Human Rights and Fundamental Freedoms.[60] Although the second and third parts of this article are directed to Treaty members and not individuals, the first part is expressly directed to every natural and legal person: 'Every natural or legal person is entitled to the peaceful enjoyment of his possessions. No one shall be deprived of his possessions except in the public interest and subject to the conditions provided for by law and by the general principles of international law'. The question arises whether personal data constitute 'possessions' for the purpose of this article.[61] Although the European Court has thus far never expressly addressed the status of personal data under this article, several rulings provide clear indications that the concept of property is certainly not restricted to physical goods. In the Gasus ruling, the Court stipulated that: '… the notion 'possessions' (in French: biens) in Article 1 of Protocol No. 1 (P1-1) has an autonomous meaning which is certainly not limited to ownership of physical goods: certain other rights and interests constituting assets can also be regarded as 'property rights', and thus as 'possessions', for the purposes of this provision (P1-1).'[62] A glance at several other rulings on the notion of 'possessions' makes clear that it covers a wide range of non-physical goods, among others intellectual property rights.[63]

But there are other developments that testify more explicitly to the growing influence of property thinking in the human rights domain. First, as will be discussed in more detail below, the property dimension is becoming an important phenomenon in the area of publicity rights. Many court rulings, with as an illustrative recent

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et le Droit, Antwerpen, Maklu 2001, pp. 404-414 (rejecting a property approach and arguing that the *Selbstbestimmungsrecht* is the basis of data protection law, p. 405).

60. Protocol to the Convention for the Protection of Human Rights and Fundamental Freedoms as amended by Protocol 11 (ETS No. 155). The amendments came into force on 1 November 1998. Available at: <conventions.coe.int/treaty/en/Treaties/Html/009.htm>.

61. Aside from the conceptualization of 'property' and 'possessions' under this Protocol, the broader issue that of course needs discussion is whether the notion of ownership encompasses the sort of ownership that we seek to define when dealing with personal data rights. The understanding of ownership that applies to physical things, such as watches, books or cars, does not encompass all of the legally relevant interests that the term privacy denotes. This contribution however does not develop a definition of property or discusses the arguments that have been brought forward in the debate on the different conceptions of ownership. Nor does this contribution analyze the various functions of property. *See* on these issues in relation to human rights: G.F. Gaus, 'Property, Rights and Freedom', in E.F. Paul, F.D. Miller Jr., J. Paul (eds.), *Property Rights*, Cambridge, Cambridge University Press 1994, pp. 213-214; D. Beyleveld, and R. Brownsword, *Human Dignity in Bioethics and Biolaw*, Oxford, Oxford University Press 2001.

62. *Gasus Dosier-und Fördertechnik GmbH v. the Netherlands*, European Court on Human Rights, 24 January 1995, Series A, vol. 306 B, §53. Available at: <hudoc.echr.coe.int>

63. More in detail on this argument: C.M.C.K. Cuijpers, *Privacyrecht of privaatrecht? Een privaatrechtelijk alternatief voor de implementatie van de Europese privacyrichtlijn*, The Hague, Sdu 2004.

example the May 2004 UK ruling in the Naomi Campbell case[64], testify to the hybrid character of commercial personality rights. Here, commercial interests combined with the property argument, appear to play a key role in the debate on the proper scope of protecting personality characteristics, such as a person's name, appearance, voice, signature or likeness. Another area where market-oriented arguments enter the domain of human rights is that of biotechnology.

5.1. PROPERTY, PRIVACY AND PERSONALITY

Several years ago, the magazine *Hello!* published without permission photographs of the wedding of celebrities Michael Douglas and Catharine Zeta-Jones. The newly-weds were clearly not amused. Their anger was, however, fueled not so much by the fact that they felt their privacy had been violated. Rather, the couple had entered into an exclusive publication contract with another magazine, *OK!,* and had made the 'private' matter of their wedding into a commercial transaction. By publishing the pictures, *Hello!* had deprived them of their 'right' to exploit their celebrity status for profit.[65]

The Douglas case as well as many other examples – among them rulings on the claims of a football-player, TV presenter, actors[66] and afore-mentioned Naomi Campbell[67] – all show that there is a clear demand for exclusive rights in personal characteristics such as a person's name, appearance, voice, signature or likeness.

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64. The supermodel Naomi Campbell wanted compensation for the publication by the *Daily Mirror* of articles and photographs that suggested drug-addiction. *Campbell v. Mirror Group Newspapers* [2002] EWHC 499 (QB). Overturned on appeal: [2002] EWCA Civ. 137.On May 6, 2004 the law lords overturned in a 3-2 majority the ruling of the Court of Appeal, acknowledging that individuals, including celebrities, have a right to privacy which is wider than the existing UK law of breach of confidence, or disclosure of private information. Available at: <www.bailii.org/cgi-bin/markup.cgi?doc=/uk/cases/UKHL/2004/22.html>.
65. The couple went to court, arguing their case on an action for breach of commercial confidence and the UK Data Protection Act 1998. After addressing the role of the law of confidence and attaching considerable importance to the rights of freedom of expression as well as privacy, the court held Hello! liable to pay *OK!* £1,033,156 to cover the total cost of its lost sales, the loss of advertising revenue and wasted costs. Douglas and Zeta-Jones were awarded a sum of £50 each under the Data Protection Act 1998 and £7,000 for wasted costs. The case, as well as many other stories that deal with the balance to be struck between privacy and freedom of the press are discussed in detail in: J. Rozenberg, *Privacy and the Press*, Oxford, Oxford University Press, 2004 (chapter 2).
66. *See* the Ewan McGregor case, decided 11 November 2003, in which the actor won an action against a photo agency over photographs of his two children [*McGregor v. Fraser*, High Court of England and Wales, No. [2203] EWHC 2972, 11/11/03].
67. For a discussion of several cases, *see*: Rozenberg, *supra* note 65; R. Wacks, 'Privacy, Property, and Personality – Do We Need Them?' Conference Paper, Edinburgh 2000, available at: <www.law.ed.ac.uk/ahrb/script-ed/>. *See also* the personality database, established as part of 'Privacy, Property, Personality', a project of the AHRB Research Centre for Studies in Intellectual Property and Technology Law based in the School of Law at the University of Edinburgh: <www.law.ed.ac.uk/ahrb/personality/database.htm>

The question then is what arguments necessitate a legally recognized entitlement in one's own individual features. Some commentators have contended that the key argument in favor of establishing personality rights for the rich and famous relates to market-oriented arguments: the economic interests of the person (actor, singer, supermodel or other celebrity) who has invested considerable time, labor and effort in his or her appearance, image, fame or reputation, deserves protection. A publicity right provides economic incentives (it stimulates the creation of a 'personality') and safeguards a fair distribution of a person's market value.[68] Moreover, publicity rights stimulate economic growth: companies may obtain an exclusive license to commercially exploit a person's celebrity status in order to run an exclusive news-item (the Douglas/Zeta-Jones example) or marketing campaign. Another line of argument holds that allowing personality rights results in more efficient use of a celebrity's persona.[69] Finally, while analyzing the property-related justifications for publicity rights some commentators rely on the parallel with intellectual property rights and more specifically with copyright.[70] The arguments in favor of both copyright and publicity rights originate in economic incentives, fair distribution and safeguarding market value.[71] As will be shown below, there appear to be, however, clear differences in the property regimes surrounding copyright and possible property regimes surrounding privacy rights.

Opponents of a property-based rationale have argued that economic interests alone cannot justify the existence of a personality right in personal characteristics. It is simply not plausible that a singer, actor or celebrity, who earns his money by making music and films, or performing, and has sold himself to the highest bidder, has waived all dignity-based aspects of his personality. Or as Weber noted, free commercial appropriation of a persona by others is unsatisfactory with regard to human dignity, because the decision to be associated with a certain commercial product is not entirely a commercial issue, but part of the inner core of a person's personality.[72] The second argument of relevance in the debate on personality rights is therefore related to dignity-based considerations. Dignity survives a commercial transfer of a certain personality characteristic. Private autonomy (self-determination), identity and privacy are seen as major aspects of dignity: the individual's dignity, his autonomous status concerning the indicia of his identity, does not allow appropriation by others without good reason.[73]

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68. *See* on these arguments: O. Weber, 'Human Dignity and the Commercial Appropriation of Personality; Towards a Cosmopolitan Consensus in Publicity Rights?', 1 *Script-ed. Online Journal of Law and Technology* 178-261 (2004). Available at: <www.law.ed.ac.uk/ahrb/script-ed/docs/personality.asp>.
69. M. Madow, 'Private Ownership of Public Image: Popular Culture and Publicity Rights', 81 *California Law Review* 127-240 (1993), pp. 223-224.
70. *See*: Weber, *supra* note 68.
71. Although noting that exclusive rights in the area of copyright are justified as stimulus for investment in culture and industrial inventions, whereas publicity rights serve no public interest or higher economic goal. Weber, *supra* note 68.
72. Id..
73. Id., citing D. Lindsay (footnote 109).

Huw Beverly-Smith, in analyzing common-law and civil-law court rulings, nevertheless concludes that it is the very 'mixture of property-based arguments and arguments based on protecting personal dignity (that) inevitably reflects the hybrid nature of the problem of appropriation of personality and both its economic and dignitary aspects'.[74] Although there is no international consensus on the specific rules relating to the commercial appropriation of personal characteristics, such as those resolving the conflict between publicity rights and other important interests (such as freedom of the press and arts)[75], it is clear that when examining the interests of publicity rights involved, the courts are protecting not only interests relating to human dignity and personality, but also interests in economic and propriety nature.[76] To summarize, the combination of economic arguments and dignity-based arguments appear to advocate for an individual's entitlement in his or her personal characteristics and thus in favor of establishing publicity rights.[77] Here, human rights and property rights seem to get along rather well.

5.2. PROPERTY, HUMAN DIGNITY AND THE HUMAN BODY

More than ten years ago, the California Supreme Court ruled in the famous case *Moore v. Regents of the University of California*[78] that an individual whose cells were derived from his spleen did not have a property interest in this 'naturally occurring raw material', whereas by contrast, the doctors who created a cell line from this material were granted a patent. In other words, Mr. Moore could not claim property rights in his cells because this would slow the further development of research. The researchers, however, were given a commercially highly valuable property right.

Contrary to what the outcome of the ruling may imply, legal acts in the area of biotechnology and intellectual property rights in particular show that information related to individual human beings is not normally regarded as something that can be owned or sold for profit. Art. 4 of the UNESCO Declaration on the Human Genome and Human Rights specifically refers to the argument of 'dignity and identity of all

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74. H. Beverly-Smith, *The Commercial Appropriation of Personality*, Cambridge, Cambridge University Press, 2002, p. 287. The author offers a detailed account and analysis of the various perspectives on personality rights. *See also*: E. Volokh, 'Freedom of Speech and Information Privacy: The Troubling Implications of a Right to Stop People from Speaking about You' 52 *Stanford Law Review* 1049-1218 (2000), p. 1049 (Online: <www.law.ucla.edu/faculty/volokh/privacy.htm>)
75. On the multitude of different legal instruments between jurisdictions, *see*: Weber, *supra* note 68.
76. *See* on this in detail: Beverly-Smith, *supra* note 74, chapter 11.
77. For a discussion of the downside of vesting a property right in personality, *see*: D. Leenheer Zimmerman, *supra* note 7.
78. 793 P.2d 479 (Cal. 1990), cert. denied, 111S. Ct. 1388 (1991). For a detailed discussion and analysis of the case, as well as its broader implications for the distinction between public and private information, *see*: J. Boyle, 'A Theory of Law and Information: Copyright, Spleens, Blackmail, and Insider Trading', 80 *California Law Review* 1413-1540 (1992).

human beings' when stipulating that 'The human genome in its natural state shall not give rise to financial gains.'[79] A similar provision is included in Art. 21 of the Council of Europe's Convention on Human Rights and Biomedicine.[80] Both provisions seem to suggest that commodification of information on individual human beings is not accepted by the law. Nevertheless, as the *Moore v. Regents* ruling clearly shows, intellectual property rights are indeed granted in respect of human material. Other developments in the United States also show that legislative initiatives may allow for the commodification of human body parts.[81]

Inspired by the *Moore v. Regents* case as well as by technological progress in biomedicine, various theorists have discussed the controversy on privacy, property and the human body, suggesting that the debate over ownership and the limits of rights of property and control over objects and information related to the human body has only just begun. Is it permissible for us to transfer the rights over our bodies, body parts or unique information about our bodies to others? Do we have commercial property in them or would this violate human dignity? A glance at the publications shows there is little consensus about whether there should be private property rights (patents) over stem cells and gene sequences. Proponents answer in the affirmative, arguing that only by granting such rights will we guarantee the required investment to produce medicines and treatment therapies. Others regard the commodification of our bodies as a dreadful scenario, declining that the rule of economics determines ownership of something (our body) that belongs in principle to ourselves or everyone (considering it part of our common human heritage).[82] Reflecting on the issue of ownership of human body parts, various theorists have attempted to draw a line between what is commodifiable and what is not.[83] In doing so, commentators have shown that setting the limits of monopolies in genes and body parts appears difficult and tricky.[84]

Several of the arguments mentioned in the debates on the appropriation of human body parts, as well as an individual's personality, will be encountered further on in this chapter, in the analysis concerning the establishment of a property right in a person's data. For now, we can summarize this brief sketch by concluding that

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79. Article 4 of the UNESCO *Universal Declaration on the Human Genome and Human Rights*, Paris 11 November 1997. Available at: <www.unesco.org/shs/human_rights/hrbc.htm>.
80. Council of Europe, *Convention for the Protection of Human Rights and Dignity of the Human Being with Regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedice*, Oviedo, 1997. online: <conventions.coe.int/Treaty/en/Treaties/Word/164.doc>.
81. Beyleveld and Brownsword, *supra* note 61, p. 171 (footnote 1).
82. *See* on the different arguments e.g. A. McCall Smith, 'Property, Dignity and the Human Body', 2 *Privacy and Property. Hume Papers on Public Policy* 29-38 (1994); Beyleveld and Brownsword, *supra* note 61, chapter 8.
83. *See*, e.g., Beyleveld and Brownsword, *supra* note 61, in particular chapter 8; G. Laurie, *Genetic Privacy. A Challenge to Medico-Legal Norms*, Cambridge, Cambridge University Press 2002 (in particular chapter 6); J. Boyle, *supra* note 78; C. Barrad and M. Valerio, 'Genetic information and property theory', 87 *Northwestern University Law Review* 52-70(1992); M. Everett, 'The social life of genes: privacy, property and the new genetics', 56 *Social Science & Medicine* 53-65 (2003).
84. *See* e.g. M.J. Radin, *Contested Commodities*, Cambridge, Harvard University Press, 1996.

the commercial exploitation of attributes of an individual's personality or body apparently has important potential for our modern economy. New commercial practices challenge legal doctrine, as well as the courts, to think about the ways in which private property rights and human rights can be balanced. At least one line of argument holds that commercial and economic imperatives demand that adequate protection for human rights can only be secured if we expand the scope of property rights to include intangible objects related to individual persons.

5.3. CONTRACTUAL FREEDOM AND HUMAN RIGHTS

The basic assumption under a property approach, whether applied to name and fame, human body parts or personal data, is that individuals are able to exercise their free will with respect to these rights through the conclusion of contractual arrangements. Creating property rights assumes that private ordering and commercial arrangements determine the position of the respective parties. However, to what extent are individuals allowed to waive the protection of their fundamental rights by means of a contract?[85] Can constitutional rights be sold to the highest bidder?

As mentioned above, opponents of the notion that privacy is a commodifiable asset base their arguments on the claim that privacy is a human right and, as such, cannot be alienated. But the human rights argument may, of course, also work the other way around: in a pure sense, the idea of human rights is all about empowerment. It could be argued that to deny individuals a property right in privacy for the reason that such an approach sits uneasily with human rights, would violate these very same rights: why should we prevent free individuals from using what means they have to strengthen their position, even if this does involve being exploited by others?[86] Denying individuals a property right would leave them less able to bargain for their interests, and thus less-empowered. The question then arises, what takes preference, individual autonomy or the human rights laid down in our constitution?

The principle of individual autonomy assumes that parties enter into contracts voluntarily, guaranteeing them a considerable degree of freedom to enter into contractual obligations. This principle is also recognized in relation to constitutional law, meaning that freedom of contract even prevails when the contract sees to fundamental human rights that are accorded protection under the constitution. Thus, under continental European law, individuals are allowed to waive the protection of their fundamental rights, albeit that the European Court of Human Rights requires that the individual who consents to waiving his fundamental rights does so in an explicit manner.[87] When applied to personal data, the constitutional recognition of privacy thus does not prevent individuals exploiting their privacy rights by using

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85. Of course, the contractual arrangement may also be used to protect privacy in that it imposes an obligation to respect privacy and not to disclose certain personal data.
86. *See also*: Beyleveld and Brownsword, *supra* note 61, p. 171.
87. *See* the rulings *Deweer/Belgium*, ECHR 27 February 1980, A 35 §48-54; *De Wilde, Ooms, Versyp/Belgium*, ECHR 18 June 1971, A12 §65, available at: <www.dhdirhr.coe.fr>. *See also* on

the instrument of freedom of contract. Individuals are free to negotiate the content of agreements to best suit their needs, and to ensure the most efficient exploitation of the economic value of their personal data.

But other legal regimes may nevertheless prevent an individual from alienating his rights in personal data. As known, the European Union has laid down specific provisions as regards the use of personal data in its Directive 95/46/EC.[88] An issue that thus remains to be dealt with relates to the intersection between European data protection legislation and the freedom of contracts: can – and if yes, to what extent – contracting parties depart from the legal framework set under the European data protection Directive? May individuals freely decide whether they want to benefit from the level of protection established by the European legislature, and does the principle of contractual freedom thus overrule the legislative balance in protecting personal data as established at the European level? Or does the European Directive limit the parties' freedom of contract because it dictates that they should adhere to a certain minimum standard of privacy protection?[89]

6. CONTRACTUAL FREEDOM, CONTROL RIGHTS AND THE EU PERSONAL DATA DIRECTIVE

To answer the above question we need to explore whether the specific provisions of the European Directive on personal data protection stipulate anything on their mandatory character. In the past, the European legislature has intervened several times in contractual relationships. It has found it appropriate to intervene in contractual relationships in the area of consumer protection and intellectual property rights and thus has put in place mandatory provisions to limit the parties' freedom of contract. Art. 9(1) of the European Computer Programs Directive, e.g. stipulates that 'any contractual provisions contrary to Article 6 or to the exceptions provided for in Article 5(2) and (3) shall be null and void.'[90] Other examples can be found in Article 15

these and other relevant rulings: R.A. Lawson, H.G. Schermers, *Leading Cases of the European Court of Human Rights*, Nijmegen, Ars Aequi Libri, 1997, pp. 637-638.

88. Directive 95/46 of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of individuals with regard to the processing of personal data and on the free movement of such data, *Official Journal* L 281/31, 1995.

89. Compare Bergkamp who argues: 'In other words, even if an individual wants to give up some or all of his privacy rights (e.g. to obtain a lower price for a product or service), EU law will not let him do so. The EU privacy rights cannot be waived in any matter. Consequently, any agreement pursuant to which a data subject waives some or all of his rights under the Data Protection Directive is void and unenforceable, even if the agreement otherwise meets al the validity requirements and is in the data subject's interest.' Lucas Bergkamp, *European Community Law for the New Economy*, Antwerp, Intersentia, 2003, p. 123.

90. Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs, *OJ* 1991 L122/42.

of the European Database Directive,[91] Article 12 of Directive 85/374 dealing with products liability,[92] Article 12 of Directive 97/7 on the protection of consumers in respect of distance contracts[93] as well as Directive 99/44[94] and Directive 00/31.[95]

A glance at the European Directive on personal data protection reveals that it does not contain provisions or indications as to the imperative character of the provisions.[96] In contrast with the legal frameworks mentioned above, the Directive is almost completely silent on the mandatory character of its provisions. Nor does it indicate that the established level of personal data protection is of a mandatory character. Given that in practice, individuals are often 'weaker parties' – due to the fact that they rarely possess the sufficient information, as well as resources, to control the use of their personal data and thus their control as a bargaining tool in exchange for certain privileges – it is somewhat surprising to note that the European lawmakers did not intervene in contractual relationships on the processing of personal data. Nevertheless, given that the Directive is silent on the mandatory character of the Directive's level of protection, the logical conclusion must be that individuals are free to regulate by contract the collection, use, distribution and further processing of their personal data.[97] Hence, contrary to what might be expected, the European Directive allows parties to commercially exploit their personal data without any interference from the European data protection regime.

The conclusion that freedom of contract prevails in the area of personal data protection does not, of course, mean that the contracting parties may freely determine their relationship. Clearly, the principle of freedom of contract does not allow parties to reach a result that is most unfavorable to a weaker party. When parties contract on the processing of personal data, their relationship is affected by general principles of

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91. Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, *OJ* 1996 L 077/20. Art. 15: 'Any contractual provision contrary to Articles 6 (1) and 8 shall be null and void'.
92. Council Directive 85/374/EEC of 25 July 1985 on the approximation of the laws, regulations and administrative provisions of the Member States concerning liability for defective products, *OJ* 1985, L 210/29. Art. 12: 'The liability of the producer arising from this Directive may not, in relation to the injured person, be limited or excluded by a provision limiting his liability or exempting him from liability'.
93. Directive 97/7/EC of the European Parliament and of the Council of 20 May 1997 on the protection of consumers in respect of distance contracts, *OJ* 1997 L 144/19. Art. 12: '(1) The consumer may not waive the rights conferred on him by the transposition of this Directive into national law. (2) Member States shall take the measures needed to ensure that the consumer does not lose the protection granted by this Directive by virtue of the choice of the law of a non-member country as the law applicable to the contract if the latter has close connection with the territory of one or more Member States'.
94. *See* Art. 7. Directive 99/44/EC of the European Parliament and of the Council of 25 May 1999 on certain aspects of the sale of consumer goods and associated guarantees, *OJ* 1999 L 171/12.
95. *See* Art. 10. Directive 00/31/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 2000 L 178/1.
96. Art. 8(2)(a) however provides that member states are allowed to prohibit the processing of sensitive data even when the data subject has consented to the use of these data.
97. *See* in detail on this: Cuijpers, *supra* note 63.

law (e.g. to protect weaker parties to a contract) on the basis of which a number of measures have been established to redesign the balance of power between contracting parties. Most systems of continental European law contain a vast array of legal rules that limit the stronger party's freedom of contract. These measures range from the imposition of substantive provisions that strengthen the position of the weaker party, to the prohibition of certain contractual clauses that are deemed unfair or excessive, and the legal obligations to fulfill certain formalities at the time of the conclusion of the contract (among them, the form of the contract and the information to be provided to the weaker party). It is clear that also in the sphere of personal data, these and other measures allow the courts to interpret, supplement, or correct the inequalities of bargaining power between contracting parties.

The conclusion that the EU Directive clearly facilitates a contractual approach to protecting personal data may even be taken one step further. For it could be argued that utilitarian considerations weigh heavily under the European system. As known, the Directive has two aims: 1) achieve a harmonized minimum level of personal data protection in the European Union and 2) abolish existing barriers to the flow of personal data between EU member states by allowing the free flow of personal data within the European Union. When subsequently considering the constituting principles of the Directive, one notes that in essence, the regime has nothing to do with the traditional human rights-based perspective of control and respect for the private sphere. Instead, the Directive works with a set of principles of fair personal data processing which have very little to do with fundamental interests essential to individual autonomy, dignity and freedom. The starting point of the European legal regime is that processing of personal data is in principle allowed, provided that it is done in accordance with the stipulated principles of fairness, finality, transparency, proportionality, confidentiality, and control.

Although the EU Directive favors utilitarian considerations in protecting personal data as well as allowing for private arrangements regarding the level of protection, this does not imply that the framework acknowledges property interest in personal data. The EU regime doesn't even expressly recognize as a starting principle the legal right of an individual to control the use, disclosure or further distribution of his data. One could even argue that it is not the data subject who determines what happens to his personal data and may pursue his particular interests with respect to these data. Instead, it is the processor of the personal data who, provided he acts in accordance with these above principles, may freely collect, use, control and further process personal data, unless one of the enumerated exceptions applies. Hence, the property perspective is definitely not the starting-point taken under the EU Directive: it does not forbid the processing of personal data without the permission of the individual, it merely guarantees a fair use of personal data.

Nevertheless, when viewed from the perspective of control rights, the European system does offer some indications that individuals have been accorded with certain instruments. Firstly, Article 14(b) of the Directive stipulates that an individual may object to the use of his personal data for direct marketing purposes (absolute right to opt-out). Although this provision does not restrict in advance the processing of personal data for direct marketing purposes, an individual may apply this provision to

control the use of his data. Secondly, Article 7 of the Directive mentions permissible grounds for processing personal data. In a commercial setting, four of these appear particularly relevant. From these four, three provide the data subject with at least some power to influence the processing of his data. First of all, Article 7(a) allows processing when the data subject has unambiguously given his consent. Secondly, Article 7(b) makes it permissible to process personal data if this is necessary for the performance of a contract to which the data subject is party, or in order to take steps at the request of the data subject prior to entering into a contract. Finally, Article 7(f) allows the processing in case this 'is necessary for the purposes of the legitimate interests pursued by the controller or by the third party or parties to whom the data are disclosed, except where such interests are overridden by the interests for fundamental rights and freedoms of the data subject which require protection under Article 1(1).'[98] Although in everyday practice these grounds offer data subjects very little power to determine the actual use of their personal data, the grounds do vest some form of legal control in individuals. Finally, Article 8 is worth discussing here. This provision grants special protection to 'sensitive data revealing ethnic origin, political opinions, religious or philosophical beliefs, trade-union membership, and the processing of data concerning health or sex life'. Such data may only be processed under certain clearly-defined circumstances, one of which being that the data subject has given his explicit consent. Since all other circumstances listed are rarely present in a commercial setting, the processing of sensitive data for commercial purposes will almost always require the explicit consent of an individual.[99] The requirement of explicit consent implies that the individual must have clearly indicated his assent to the processing. Since non-sensitive data can sometimes be linked to sensitive data (e.g. navigational data on an individual's visits to websites that can be linked to health-related data), the implications of the consent requirement may go beyond the scope of pure sensitive data.

The above discussion shows that the European Directive is clearly not shaped from the basic perspective of an individual's autonomy and choice regarding his personal data. Nevertheless, some instruments of control and power are included in the regime and some may thus claim that, at least in a commercial setting, a property approach may not, in the end, be such a very strange phenomenon under the European regime after all. One could even argue that the European legal system on data protection appears more receptive towards a property approach than the American system. But would vesting a property right in personal data offer individuals a better instrument with which to protect their interests, thus solving present-day problems of data protection? While vesting a property right in personal data may indeed have some appeal, albeit for rhetorical purposes, the obvious question is what the consequences of such an approach would be. Is such an approach viable, and

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98. In the situations covered by Art. 7(f), the individual may object to the use of his personal data. However, in contrast to the use for direct marketing purposes, the opt-out right is here not absolute.
99. *See also*: C. Kuner, *European Data Privacy Law and Online Business*, Oxford, Oxford University Press 2003, p. 70.

would it really offer the claimed prospects of achieving a higher level of personal data protection?

7. REFLECTIONS ON PROPERTY IN PERSONAL DATA

As mentioned earlier, not all commentators applaud the idea of an explicit legal recognition of the propertization of personal data. Some even argue that a discussion over a property approach versus a dignity approach does not seem especially helpful because such a discussion unduly privileges form over substance.[100]

A first reason why it is argued that a property rights approach cannot play an adequate role in protecting privacy relates to the concept of property itself. Property is not simply a natural or innate quality of objects, since the definition of the concept is itself a social construct.[101] Property is based on 'socioeconomic facts and on that which a society considers legitimate.'[102] Moreover, as Etzioni argues, different societies define different objects and interests as appropriate or inappropriate objects of private property in their attempt to balance individual interests with the broader interests of society. Hence, the property concept cannot provide a strong and privileged ground for protection: '… relying on private property rights to serve as a basis for privacy hardly gives this right the privileged standing that individuals claim for it.'[103]

In reaction to the specific suggestion made by Lessig to assign individuals a property interest in his or her personal data, Schwartz has drawn the attention to several other structural difficulties with such a propertization approach. He mentions among others the lack of collective action ('individual privacy wishes need to be felt collectively in the market'[104]) and the phenomenon of bounded rationality ('default rules and form terms can have great psychological force and are likely to reward those who otherwise have great power (…) Specifically, in the current market, this move will benefit the parties who process and share our information and not those who help us place limits on this processing. As a result of this current power dynamic, individuals faced with standardized terms and expected to fend for themselves with privacy-property and available technology are likely to accept whatever data processors offer them.'[105] In line with this argument other commentators have contended also that the benefits of according a property right are unclear, as it would be a Pyrrhic victory: online commerce is increasingly governed by (standardized) contracts between providers and users, and less by a priori (default)

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100. Compare the excellent article by J. Kang and B. Buchner, 'Privacy in Atlantis', 18 *Harvard Journal of Law & Technology* 229-267 (2004).
101. A. Etzioni, *The Limits of Privacy*, New York, Basic Books 1999, p. 201.
102. Id., p. 200.
103. Id., p. 201.
104. P.M. Schwartz, 'Beyond Lessig's *Code* for Internet Privacy: Cyberspace Filters, Privacy-Control, and Fair Information Practices', 2000 *Wisconsin Law Review* 743-788 (2000), p. 767.
105. Id., p. 768.

entitlement structures.[106] In the day-to-day practice of the online world, businesses and other users of personal data apply 'take it or leave it' terms under the threat of exclusion or denial of access to digital services. Individuals thus appear to 'gladly' consent to certain uses of their personal data. Even when they do not wish to consent or are reluctant to do so, they are nevertheless forced to consent because without use-rights, companies are unwilling to provide the services wanted. In other words, vesting a property right would not make any difference because bargaining would appear impossible, or consumers would have no effective choice in the matter.[107] A suggested solution would be the development of global minimal background standards of due process and public policy limits on private agreements. Such an approach is seen as a necessary ingredient for self-ordering in an on-line world.[108] Others argue along this line, claiming that to do any good, the property right might have to be inalienable and waivable only in certain limited circumstances (comparable to the moral rights under intellectual property law).

Another remark that has been made is that a propertization of personal data would merely address the problems of personal data protection in relation to private sector use: 'Consumers may have some bargaining power with a direct marketing firm that wants to trade lists of named individuals; citizens, however, have no bargaining power when faced with a warrant or any other potentially privacy-invasive technique backed up by the sanctions of the state.'[109] And, as the authors remind us, was it not the power of government agencies that were considered to pose the most significant challenges?

Creating a property right in personal data may also be objectionable because actually licensing all the necessary data would be costly, inconvenient, and time-consuming. If we vested a property right in personal data, it would mean that companies and organizations have to obtain permission from each of the hundreds of millions of individuals whose personal data they wanted to process. 'At the most trivial level, we will all be filling out a lot more forms. While this may be an annoyance for the individuals involved, those who are compiling large amounts of data may find the aggregate effort and cost daunting.'[110] Proponents of ownership rights have reacted by arguing that by applying technological means, the cost of expressing permissions alongside customer information may reduce so dramatically that it is now easier and cheaper for consumers to manage the property rights over their personal information than it is for the companies collecting it.[111] Zittrain, describing the use of personal data in the medical arena, made the claim that 'trusted' architectures, i.e. hardware

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106. Radin, *supra* note 84, p. 18.
107. *See also*: De Hert, *supra* note 59, p. 409.
108. Radin and Polk Wagner, *supra* note 13.
109. C.J. Bennett and C.D. Raab, *The Governance of Privacy. Policy instruments in global perspective*, Aldershot, Ashgate Publishing, 2003, p.17.
110. Lemley, *supra* note 13, p. 1552; Samuelson, *supra* note 27, at: 1137.
111. *See* recently Lessig, *supra* note 10, at p. 263: 'My assumptions about the value of a property system assume that the negotiations and preferences about privacy would be expressed and negotiated in the background automatically. This was the aspiration of the technology Platform for Privacy Preferences (P3P) in its first description.'

and software that take note of various entitlements to personal data they store and that automatically enforce those entitlements, could help negotiate the allocation of use rights to personal data. Thinking in terms of privication architectures could balance the legitimate interests of parties who wish to use data and the interests of individuals who 'produce' these data.[112]

But this does not solve the problem entirely. There are many legitimate uses of individuals' personal data, meaning that an extensive list of exceptions to the property right would have to be drawn up, and we may question whether the specifics of these exceptions may always be translated into technical code. Also, we might conclude that certain uses are not acceptable and consent could never be given, which again would necessitate a list of 'unacceptable' uses (e.g. in the area of sensitive data).[113] In other words, establishing a property right would at the very least imply the introduction of some sort of statutory delineation of permissible and impermissible uses of personal data. But in the end, would such a system not be very similar to the present framework established under the EU Directive on personal data protection?

Vesting a property right in personal data also would confront us with the difficult question, in what sorts of 'personal data' property rights should be vested? Exactly what data should and will fall within the ambit of the property right? As noted by Lemley, the more broadly we define the right, the more we will interfere with everyday commerce. In illustrating this point he mentions the example of stock market data that are aggregated from billions of individual bits of information, each representing an identifiable financial transaction by an individual or a corporation. 'Do I "own" knowledge of the price at which I bought stock in Microsoft? If not, how can we distinguish that information from other aspects of my financial life that I would very much like to keep private? And if so, will we prevent the *Wall Street Journal* from reporting stock prices?'[114]

If we were to follow the definition laid down in the EU Directive, the scope of personal data would be rather broad.[115] An illustration that other opinions may exist, however, is the debated UK Durant Case.[116] In this decision, handed down by

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112. J. Zittrain, 'What the Publisher Can Teach the Patient: Intellectual Property and Privacy in an Era of Trusted Privication', 52 *Stanford Law Review* 1201-1250 (2000).
113. Similar to Art. 8(2)(a) of the EU Directive on data protection, providing that member states are allowed to prohibit the processing of sensitive data even when the data subject has consented to the use of these data.
114. Lemley, *supra* note 13, p. 1550.
115. Art. 2(a) of the EU Directive on data protection defines personal data as to mean 'any information relating to an identified or identifiable natural person ('data subject'); an identifiable person is one who can be identified, directly or indirectly, in particular by reference to an identification number or to one or more factors specific to his physical, physiological, mental, economic, cultural or social identity'.
116. In this case, Mr. Durant sought disclosure of information concerning his complaints in order to re-open his case against Barclays Bank and/or to secure an investigation of this bank's conduct. As part of his activities, Durant asked the Financial Services Authority (FSA) to disclose information relating to his complaint, basing this request on section 7 of the UK Data Protection Act 1998. The FSA disclosed some of the information requested, but refused to provide other information

a Court of Appeal on 8 December 2003, a very strict interpretation of what amounts to 'personal data' was given: whenever the focus of certain information is something other than an individual person (but does include information 'about' an individual), such information will not 'relate to' the individual and, therefore, does not qualify as personal data.[117] In other words, when details of a website visitor (IP address, name) are collected and those details are in principle not to be used to profile an individuals' spending preferences, but instead are collected for fraud-detection (and thus may possibly have at a later stage implications for individual persons), such information will not be considered personal data.[118] Whereas different opinions on the scope of the criterion 'personal data' may have certain problematic consequences, they are not as far-reaching in situations in which personal data are worth money for the very reason that they are an individual's property. Hence, a key problem will be that vesting a property right in personal data implies that 'someone' defines precisely what is worth a property right. But who then will make the paternalistic choice between data that are and are not within the ambit of an individual's personal property? The legislatures, the courts, or individuals themselves?[119] Given that the decision will not merely be influenced by economic factors but also by moral and societal considerations, which again may be highly dependent on the specifics of the context in which the data may be 'sold' and 'used', the property approach would face severe difficulties.[120]

In the context of defining the proper scope of the term 'personal data', one additional issue needs to be considered. In certain situations, personal data may not be related to merely one unique individual. One such situation would be where other individuals (e.g. family members or in the case of genetic data, members of the same biological group) could also have rights to certain personal data because the personal data are 'shared' data. These other individuals could also be considered as 'data subjects' with all the rights that follow from this. Establishing a property right in such data would, at the very least, imply shared exclusive rights. Given

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as well as 'redacted' other pieces of information (in order to protection the rights of third persons who could be identified on the basis of that information). Durant disagreed with the approach taken by the FSA and took the matter to court. *Michael John Durant v. Financial Services Authority*, [2003] EWCA Civ 1746, Court of Appeal (Civil Division), 8th December 2003. The full text of the judgment can be found via <www.bailii.org/ew/cases/EWCA/Civ/2003/1746.html>.

117. 'Mere mention of the data subject in a document held by a data controller does not necessarily amount to his personal data. Whether it does so in any particular instance depends on where it falls in a continuum of relevance or proximity to the data subject as distinct, say, from transactions or matters in which he may have been involved to a greater of lesser degree… In short, it is information that affects his privacy, whether his personal or family life, business or professional capacity…'
118. *See* the commentary by the UK Information Commissioner, 'The 'Durant' Case and its impact on the interpretation of the Data Protection Act 1998'. Available at: <www.informationcommissioner.gov.uk>.
119. *See also*: Gutwirth, *supra* note 13, pp. 39-41.
120. Let alone other difficult questions such as: how do we create remuneration payment schemes; realize commercial personal data transfer on behalf of children and mentally ill people; sort out actual owners of personal data from fake?

the nature of certain personal data (when sensitive or financial data are involved), it is conceivable that conflicts arise between the different titleholders, either when it comes to selling the rights or keeping the data confidential. Individuals who 'share' a property right in certain personal data may have different opinions as regards the question whether their privacy should be addressed in market terms. Some may favor the selling of their data, whereas other may forcefully reject such a proposition because it would compromise their right to self-determination, dignity and autonomy. Given the present-day developments towards group profiling and multiple identities, there will soon no longer be such a simple scenario of individual data belonging to individual people.

A final remark relates to the comparison made with intellectual property rights. As mentioned earlier, various commentators have made an analogy with intellectual property rights. However, when analyzed more closely, property rights in personal data appear to be of a different nature than property rights in intellectual works, putting the usefulness of such an analogy in doubt. Firstly, as noted by Lemley, intellectual property exists only where there is a public goods problem and people need incentives to invest, i.e. to spend time and money in the creation of new works.[121] With personal data, by contrast, there is no such need. The central aim is quite the opposite: the suppression of their collection, use and further distribution. Secondly, personal data are usually generated naturally: by doing certain things or acting according to certain preferences. Contrary to a copyrighted work, personal data are not the fruits of our intentional efforts to create these data. Thus, the differences in the property regimes surrounding copyright and a possible property regime surrounding personal data rights is that in the former case, there is an explicit theory of the relations between private property, intellectual products, and social benefit. The US Constitution explicitly stipulates that property rights are granted in order to 'promote the progress of science and useful arts.' Creative works and inventions are good for society. No one would invent and create works if they didn't get paid for it. So US Congress may assign property rights to inventors. There is no such articulation of a theory relating property rights in personal information to a broad social goal. And until there is, until it is clear what 'social' benefits accrue from those private property rights, one should be hesitant to endorse them. Finally, we would not want to be fully deprived of control over our personal data, our behavioral preferences or buying habits. Transfer of property rights in personal data about ourselves, thus alienating our privacy for commercial and economic benefit, would seem an uncomfortable scenario. A non-exclusive license would do, making it distinct from intellectual property rights.[122] This distinction relates to the argument that the concept of intellectual property rights is based on the idea of exchange for

121. Lemley, *supra* note 13, p. 1550.

122. *See however* Sholtz: '… the consumer retains rights to the property even *after* it has been transferred to the commercial organization (under contract). An obvious analogy with another powerful form of information property rights, namely intellectual property rights, is appropriate. When I buy a CD from a major Hollywood label, the Hollywood label still retain property rights to the music even though the CD is now in my possession. I have not so much purchased property rights to

value, whereas privacy, on the other hand, is ill-suited to being defined in terms of exchange.[123]

8. THE COSTS OF A PROPERTY RIGHTS APPROACH

For various reasons, commentators and interest groups have argued that vesting property rights in personal data would also be detrimental to various interests and that therefore, the costs of such an approach would be too high. A first objection to creating a property right in personal data is that this would risk enabling more, not less, commodification and thus producing less, not more, privacy.[124] Paradoxically, a protection of personal data by according data subjects a property right would increase the value of information and thus the incentive for businesses to obtain (by whatever means) these data.[125] Framing the privacy debate in terms of proprietary rights and trade in data neglects the fact that what data subjects really seek is 'to guarantee individuals control over their personal data'.[126] We lack, as Julie Cohen argued, 'a word for describing control over things without legal or beneficial ownership of them'.[127] What is more, treating personal data solely as a matter of individual negotiation and party autonomy in contracting arrangements neglects the more fundamental underlying values of privacy, as well as the collective societal interests in dignity and autonomy of individuals. Opponents of the strengthening of data protection by means of property claims therefore conclude that invoking 'platonic ideals of ownership (…) just avoids tackling the hard policy questions (…)'.[128]

Another cost-related argument against establishing a property right in personal data sees to a point of criticism heard in the debates on publicity rights. Here it is argued that a commodification of publicity rights would lead to unacceptable costs in the form of lost uses, because individuals may not always adequately capture the value of their benefits.[129] This argument is based on Landes and Posner's theory that returns that lie in the distant future are usually deeply discounted by individuals and have little effect on their present decisions.[130] This would mean that individuals could forego the granting of a license for the use of their personal data if an adequate remuneration could not reasonably be anticipated.[131] This argument relates to the

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the music as I have purchased a license to listen to the CD in my own home for non-commercial purposes.' Sholtz, *supra* note 25.

123. Cohen, *supra* note 41.
124. Cohen, *supra* note 41, p. 1379; Litman, *supra* note 2, p. 1283.
125. Litman, *supra* note 2, p. 1303.
126. Cohen, *supra* note 41, p. 1379.
127. Ibid.
128. Id., p. 1436.
129. Zimmerman, *supra* note 7.
130. On the economic arguments in favor of a right of publicity, *see*: W.M. Landes and R.A. Posner, 'An Economic Analysis of Copyright Law', 18 *Journal of Legal Studies* 325-33, 344-53 (1989), pp. 332-333.
131. Zimmerman, *supra* note 7.

larger problem of the information asymmetry that exists between companies and consumers. It seems very difficult for individuals to understand what is actually going on when online businesses collect and distribute their personal data, be sufficiently attentive to the implications of such use for their proprietary rights, let alone that they can verify what is really going on. Hence, in general, it appears very difficult for individuals to fully understand the possibilities, benefits as well as dangers of licensing their personal data. Taken one step further this argument relates to the position that individuals need to be protected and that rights in personal data protection should therefore be inalienable, so as to prevent unsophisticated people from being lured or pressured into giving up their proprietary rights without understanding the implications.[132]

A final objection to vesting a property right in personal data – raised in particular by the direct marketing industry – is that such an approach would inevitably restrict the free flow of personal data throughout the economy.[133] If individuals could prevent the collection, dissemination, or use of data about themselves, a significant portion of modern commerce would no longer be possible or economically valuable.[134] In other words, if we were to add controls to regulate the flow of personal data, we would take away the value that the market adds. Personal data have to be available to all because this is necessary for sustaining innovation and market incentives. But, as has recently been contended by Chander and Sunder, it may first be questionable whether the freely available data may indeed be equally used and exploited by all. For, in practice, 'differing circumstances – including knowledge, wealth, power, access, and ability – render some better able than others to exploit a commons.'[135] These distributional circumstances and limitations may also hamper the free availability and usability of personal data.

Moreover, commentators have claimed that the free flow of information argument is flawed, arguing that restricting information flows almost always creates value: 'The trick is to get the constraints that govern the information flow just right. Overly restrictive controls do reduce economic value, but on the other hand completely open and free trade of information (as is true of personal information exchange in today's economy) is usually very inefficient as well. A happy medium that balances the rights of the information producers with the needs of the information consumers is required.'[136] Another argument has been made by Cohen, indicating that 'the

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132. *See* on this position Bergkamp, *supra* note 58, p. 123. Also: J.E. Cohen, 'DRM and Privacy', 18 *Berkeley Technology Law Journal* 575-617 (2003), para. III.B, arguing that the decision to promote the values of self-determination and human dignity 'in the law of 'privacy' while simultaneously enabling easy evasion of accountability via 'contract' would be nothing short of perverse. Taking these intangible harms seriously requires a more consistent approach.'
133. *See* e.g. B.B. Read, 'Searching Farther For Customer Data', *PlanetIT,* 12 December 2000, cited in: Sholtz, *supra* note 25, at: <firstmonday.org/issues/issue6_5/sholtz/index.html>. Available at: <www.callcentermagazine.com/shared/article/showArticle.jhtml?articleId=8701704&classroom=>
134. Lemley, *supra* note 13, p. 1550.
135. A. Chander and M. Sunder, 'The Romance of the Public Domain', 92 *California Law Review* 1331-1373 (2004), p. 1331.
136. Sholtz, *supra* note 25, at: <firstmonday.org/issues/issue6_5/sholtz/index.html>

belief that more personal information always reveals more truth is ideology, not fact, and must be recognized as such for informational privacy to have a chance.'[137] According to Cohen, the unhesitating acceptance of the 'more is better' argument is deeply bound up with liberal political philosophy, and this represents one of the key obstacles to effectuating meaningful protection of personal data.

Finally, with respect to the free flow of information argument, the difficult question arises of balancing property interests with another interest at stake, that of preserving the public domain. In the debates on publicity rights, several authors have argued that a commodification of name and fame and thus the creation of a publicity right would represent a serious threat to the public domain.[138] Moreover, they point out that the limiting principles that are said to play an important role in protecting the public domain have lost their force as our present-day legal culture comes to rely more and more on the privatization model. As mentioned earlier, the public domain argument is an often-used argument against the propertization of various types of data, creative works, human body parts (human genome), personal name and fame, etc. Lately, the topic of the public domain has received considerable attention and in the meantime many questions in relation to the history, theory and future of the public domain have been posed and discussed.[139] The final issue for this chapter's analysis is therefore the relationship between the public domain and vesting a property right in personal data.

9. COMMODIFICATION OF PERSONAL DATA, IDENTITIES AND THE PUBLIC DOMAIN

The relationship between the public domain and the commodification of personal data can be approached in different ways. A likely effect of the privacy-as-property solution, as noted earlier by Litman, would of course be that by recognizing property rights in personal data, we further endorse the idea that facts may be privately owned and that the owner of a fact is entitled to restrict the uses to which that fact may be put.[140] In this way, vesting a property right in personal data would have a detrimental effect on the equilibrium between the public domain and private property, because it would further broaden the scope of exclusive rights. Such a broadening of the scope of exclusive rights would clearly present a dangerous signal in the present trend towards protectionism.

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137. Julie E. Cohen, 'Privacy, Ideology, and Technology: A Response to Jeffrey Rosen', 89 *The Georgetown Law Journal*, 2029-2045 (2001), p. 2036. Available at: <www.law.georgetown.edu/faculty/jec/privacyideology.pdf>. *See also*: D. Solove 'The Virtues of Knowing Less: Justifying Privacy Protections Against Disclosure', 53 *Duke Law Journal*, 967-1065 (2003), arguing that more information does not necessarily lead to more accurate judgments.
138. Zimmerman, *supra* note 7.
139. *See* e.g. the papers presented at the November 2001 Conference at Duke University School of Law. Available at: <www.law.duke.edu/journals/lcp/articles/lcp66dWinterSpring2003p1.htm>
140. Litman, *supra* note 2, p. 1294.

However, would a move towards establishing a property right in personal data make a difference in day-to-day practice? Would it indeed be detrimental of the public domain? Given that, to a large extent, individuals depend on the use of their data and that personal data are the motor of our information society, a move towards a legally recognized property right in personal data will in effect not change the free public availability and exchange of these data. It could be argued that at present personal data are almost by definition part of the public domain. They are so widely available, obtainable and usable that, for practical as well as legal[141] purposes, they seem to belong to the public domain. Would this change if property rights were vested in personal data? In theory: yes. But in reality, personal data will continue to be widely available to organizations, companies and the public. Even if personal data were to be protected by technologies such as P3P or other technical negotiating protocols, individuals would nevertheless be willing, required or forced to make their data available for use by third parties. While titleholders to copyrighted works may to a large extent oversee the limited consequences of this decision (effects on royalties obtained and 'fame'), the same is not true for individuals who decide not to sell their personal data. The axis of variation here is not that straightforward. For, in contrast to copyrighted works, decisions on access to and use of personal data may have far-reaching and sometimes unknown effects on a person's position and abilities in everyday life.[142] In contrast to copyrighted works, the issue of control of personal data is not so much as to whether personal data are used. Instead, it is about the specifics of the context in which the data are processed as well as the actual uses to which personal data are put. To capture the essence of this protection need, Helen Nissenbaum recently proposed the introduction of the concept called 'contextual integrity'. This alternative concept would tie adequate protection for privacy to norms of specific contexts, 'demanding that information gathering and dissemination be appropriate to that context and obey the governing norms of distribution within it.'[143]

Another way to consider the relationship between the public domain and the commodification of personal data is by focusing not so much on the individual data, but on the *effects* of the present-day technologies, in particular the almost limitless surveillance capacities of new technologies, such as location-based systems, radio frequency identifiers (RFIDs) and on-line personalization instruments. In a sense, these surveillance techniques require that we shift our attention from individual

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141. As was discussed earlier, the present data protection regimes are constructed along the lines of fair information processing. In principle, the use and processing is personal data is free. *See also* Simon G. Davies who argues that the European Directive on personal data protection does almost nothing to prevent or limit the collection of personal information. S.G. Davies, 'Re-Engineering the Right to Privacy: How Privacy Has Been Transformed from a Right to a Commodity', in P.E. Agre and M. Rotenberg (eds.), *Technology and Privacy: The New Landscape*, Cambridge, MIT Press 1997, pp. 156-157.
142. *See* for illustrations of this, the contributions in: D. Lyon (ed.), *Surveillance as Social Sorting. Privacy, Risk and Digital Discrimination*, London, New York, Routledge, 2003.
143. H. Nissenbaum, 'Privacy as Contextual Integrity', 79 *Washington Law Review* 119-157 (2004).

sets of personal data toward the statistical models, profiles and the algorithms with which individuals are assigned to a certain group or 'identity'. For these models and algorithms are privately owned, and thus unavailable for public contestation. But the interests of personal data protection seem to require that they are made known to the public and thus are part of the public domain. Let me discuss this point in some more detail.

Our behavior in the 'public domain' is increasingly monitored, captured, stored, used and analyzed to become privately-owned knowledge about people, their habits and social identity. Indeed, the term commodification of personal data may loose its significance once we acknowledge this trend toward a *commodification of identities and behavior*. It is this trend that is lacking in the present debate on privacy and property. Personal data are not used and processed anew and in isolation each time a company acquires a set of personal data. In contemporary society, 'useful' information and knowledge goes beyond the individual exchange of a set of personal data. In 'giving' his or her personal data to a certain organization, the individual does not provide these data for use in an 'objective' context. Today, the use and thus 'value' of personal data cannot be seen apart from the specifics of the context within which these data are used. Processing of personal data occurs within, and is often structured by, social, economic and institutional settings, as is shown among others by Phillips in his analysis of the implications of ubiquitous computing developments.[144]

Thus, the question is not so much *whether* personal data are processed. They always are and will be, whether for lawful or unlawful purposes. It is an illusion to think that vesting a property right in personal data will limit the use of personal data. Rather, the problem is *how* personal data are processed, in what context, and towards what end. Therefore, the focus of the discussion should move away from entitlements of single data. What we need are instruments to enhance the visibility of and our knowledge about how personal data are used and combined, on the basis of what data individuals are typified, by whom and for what purposes. In line with Nissenbaum's theory of contextual integrity, 'it is crucial to know the context – who is gathering the information, who is analyzing it, who is disseminating it and to whom, the nature of the information, the relationships among the various parties, and even larger institutional and social circumstances.'[145] This is a much more fundamental issue which cannot be tackled by vesting a property right in individual data. To illustrate this argument, I would like to point towards the development of ubiquitous computing environments. Ubiquitous computing will create a context-aware environment in which, by means of the coordinated use of databases, sensors, micro-devices and software agents, numerous systems will scan our environment for data and serve us with particular information, based on certain notions about what is appropriate for us as unique individual persons given

144. *See* on this argument in further detail: D.J. Phillips, 'From Privacy to Visibility: Context, Identity, and Power in Ubiquitous Computing Environments', 23 *Social Text* 95-108 (2005).
145. Nissenbaum, *supra* note 143.

the particulars of daily life and context. Some thus argue that ubiquitous systems will to a large extent structure and determine our daily life, mediating our identity, social relations and social power.[146] Not only will our homes and working offices become public places, but our social identities as well.

Given these and other developments in the area of 'pervasive' computing, the discussion about protecting personal data must become a discussion about how individuals are typified (upon what social ontology, with what goal?) and who has the instruments and power to do so.[147] In this sense, personal data protection is not about something (i.e. personal data) that can be owned. It has everything to do with position, social ordering, roles, individual status and freedom. Therefore, protection personal data in our present-day society assumes the capability to know and to control about typifying people.[148] It requires the availability of instruments to enable awareness of the context in which personal data are used and to monitor the data-impression that individuals are exhibiting to others.[149] In other words, the discussion on the relationship between the public domain and the commodification of personal data must be a discussion on whether, and to what extent, the statistical models, profiles and algorithms that are used to generate knowledge about our individual behavior, social and economic position, as well as personal interests, belong in the public domain.[150] The commodification of our identities and behavior does not need a property rights debate with respect to individual and isolated personal data. It requires a debate on the role of the public domain in providing the necessary instruments to know and to control the way in which our identities are made.[151]

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146. *See* e.g. the different papers presented at the workshop on Socially-informed Design of Privacy-enhancing Solutions, 4th International Conference on Ubiquitous Computing (UBICOMP 02), Göteborg, Sweden, September 2002. Available at: <guir.berkeley.edu/pubs/ubicomp2002/privacyworkshop/>
147. *See*: Phillips, *supra* note 144.
148. *See*: J.E.J. Prins, 'The Propertization of Personal Data and Identities', 8.3 *Electronic Journal of Comparative Law* (October 2004), <www.ejcl.org/83/art83-1.html>
149. *See* Phillips, *supra* note 144. Also: D.H. Nguyen, E.D. Mynatt, 'Privacy Mirrors: Understanding and Shaping Socio-technical Ubiquitous Computing Systems', *Georgia Institute of Technology Technical Report* (2002) Available at: <quixotic.cc.gt.atl.ga.us/~dnguyen/writings/PrivacyMirrors.pdf>
150. Moreover, individuals should be able to contest that certain determinations are made, to object to certain use, and to ask for alternative use.
151. Earlier, Vedder has suggested introducing the new concept of 'categorical privacy'. This concept is largely based on the concept of individual privacy, but includes privacy as regards information that is no longer identifiable to persons, because such information may possibly still have negative consequences for group members. A. Vedder, 'Medical Data, New Information Technologies and the Need for Normative Principles Other Than Privacy Rules', in M. Freeman and A. Lewis (eds.), *Law and Medicine*, Oxford, Oxford University Press, 2000, pp. 441-459.

10. CONCLUSION

In conclusion, let me repeat the main findings of this chapter. First, I have suggested that although it is all too often argued that the creation of a property right is not in line with the continental human rights-based approach to privacy, the European system certainly offers leeway for a property rights model. There are clear openings under European law for a utilitarian perspective on personal data protection, and it even could be argued that the European data protection system is more receptive towards a property approach than the American system.

Second, in reflecting upon the possibility to vest some form of property right in personal data, I have touched upon several consequences of the property rights approach that do seem to have a certain appeal. Further analysis reveals, however, that doubts rise about whether such an approach would indeed offer the claimed prospects of achieving a higher level of personal data protection. Also, vesting a property right in personal data would differ to a considerable extent from well-known property rights, such as copyrights. One of my key arguments was that the use of personal data cannot be viewed in the isolated perspective of one single piece of information to be used by one organization for a very specific purpose. Given developments such as ubiquitous computing, the use of personal data will increasingly occur within, and be structured by, social, economic and institutionalized settings. I have suggested that data protection mechanisms must therefore be structured along lines of control and visibility in relation to identities, instead of ownership of individual data. For in order for individuals to effectively protect their data, they should be given the instruments to know and understand how their social and economic identities are constructed, influenced and used.[152] This requires a debate on the role of the public domain in providing the necessary instruments for use to know and to control how our 'lives' are 'created'.

152. Also Phillips, *supra* note 144.

Chapter XI
Towards an Indigenous Public Domain?

Brad Sherman and Leanne Wiseman

1. INTRODUCTION

Historians of intellectual property will look back at the later part of the twentieth century as a period of politicization and change. In particular they will look back at the 1980s (or thereabouts) as marking an important turning point in twentieth century intellectual property law. Prior to this, there had been little critical commentary on intellectual property; the predominant trend (since at least the 1940s) being the expansion of intellectual property rights. Here the primary role of both academics and policy makers was to determine the best way to protect new innovations: whether, for example, computer programs ought to be protected by copyright, patents, or by some *sui generis* form of protection. Motivated by the (almost) unchallenged expansion of intellectual property rights that had taken place for much of the twentieth century, the situation began to change in the 1980s as commentators began to raise concerns about the excesses of intellectual property and the problems that this posed, particularly for users. Commentators began to complain, for example, that intellectual property hampered free speech, undermined creativity, stifled scientific research, and restricted access to medicines. While initially concerned with the extension of copyright, commentators soon turned their attention to the excesses of patents, trademarks and other forms of intellectual property.[1]

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1. Eisenberg captured the expansion of intellectual property rights and some of the problems that this creates when she said that 'for many years biomedical research has flourished while investigators have draw heavily upon discoveries that their predecessors have left in the public domain. Even if exclusive rights enhance private incentives to develop further research tools, they could do considerable damage to the research enterprise by inhibiting the effective utilization of existing ones'. R. Eisenberg, 'A Technology Policy Perspective on the NIH Gene Patenting Controversy', 55 *University of Pittsburgh Law Review* 633-652 (1994), at p. 646.

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 259–277

While commentators writing about the excesses of intellectual property tended to focus on specific issues relevant to their area of expertise, they were united by a common concern with the 'public domain'. In effect the public domain, which has an old and distinguished lineage, became a rallying point for those academics, lobbyists and commentators concerned about the excesses of intellectual property rights. As well as uniting an otherwise disparate group of commentators and critics, the public domain also played an important role in balancing (or countering) the rhetorical excesses and successes of the proponents of stronger intellectual property protection. In particular, the public domain was used to counter the image of a greedy public who stole 'the fruits of the genius' of 'creative individuals who bring new works into being'.[2] The first step in this process was the recognition of the public domain as a distinct and recognizable space. It was also necessary to counter the negative perception of the public domain merely as the residual realm of material undeserving, ineligible, or no longer protected by intellectual property.[3] To do this, the public domain was recast as a positive productive space. As Litman said, to characterize the public domain 'as the quid pro quo for copyright or as the sphere of insignificant contributions … is to neglect its central importance in promoting the enterprise of authorship'.[4] In a move that helped to shift the onus of proof onto those who argue for the extension of intellectual property rights,[5] Litman suggested that the 'public domain should be understood not as the realm of material that is undeserving of protection, but as a device that permits the rest of the system to work by leaving the raw material of authorship available for authors to use'.[6] Rather than being an afterthought of the intellectual property system, the public domain has come to be seen as an essential part of the creative process; it ensures that the 'raw materials' can be used as a basis for further creativity and innovation.[7] The success of this transformation is reflected in the fact that the World Intellectual Property Organisation (WIPO) recently said that 'a robust public domain, rather than being the antithesis of copyright protection, is the foundation upon which the copyright system works. It is the availability of public domain resources that enables exchange and creativity'.[8]

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2. J. Litman, 'The Public Domain', 39 *Emory LJ* 965-1023 (1990), p. 966.
3. As Frow said, the public domain is seen as the space that remains after intellectual property rights have been exhausted. J. Frow, 'Public Domain and Collective Rights in Culture', 13 *IPJ* 39-52 (1998). When returning to 'first principles' Litman said 'the realm protected by copyright is privately owner; the unprotected realm is the public domain'. Litman, *supra* note 2, p. 1000.
4. Litman, *supra* note 2, p. 968.
5. As Litman notes, one of the problems with the negative definition is that '[p]rotectors of the public domain have found themselves on the defensive'; that is, that they have to explain why copyright should not protect 'ideas, facts, stock scenes, titles of characters'. Litman, *supra* note 2, p. 995.
6. Litman, *supra* note 2, p. 968.
7. WIPO/GRTKF/IC/5/3, 6, para 23(a). For a general discussion *see* Litman, *supra* note 2, p. 968.
8. WIPO/GRTKF/IC/5/3 Annex, 10, para 33. 'The concept of the public domain is at the heart of the regimes of intellectual property which, in our society, regulate the public availability of

Another notable development that has taken place over the last twenty years has been the growing use of intellectual property to protect Indigenous creations. While there are a number of important differences between these developments and the expansion of intellectual property rights in other fields, there are also a number of similarities. One of these is that many of the problems associated with the general expansion of intellectual property rights have also been raised in relation to the increased use of intellectual property protection for Indigenous creations. In particular, concerns have been raised about the impact that the growing use of intellectual property protection for Indigenous creations might have for the public domain and thus for creativity more generally. Taking these developments as a starting point, this chapter will critically examine recent discussions about the relationship between Indigenous intellectual property and the public domain. After providing a brief overview of some of the ways in which intellectual property has been used to protect Indigenous creations, we then look at some of the criticisms that have been raised about the expansion of intellectual rights to Indigenous knowledge. In order to highlight some of the problems that arise when the public domain is applied to Indigenous creations, we compare the way that knowledge is organized and regulated in Western intellectual property law with the way knowledge is organized in Indigenous Communities (focusing on the Yolgnu peoples of Northeastern Arnhem Land in Northern Australia). In the final section of the chapter we look at ways in which the public domain can be reconfigured to take account of, rather than undermine, Indigenous interests. While many of the comments that we make will be relevant to Indigenous Communities in many different countries, we will focus on Aboriginal and Torres Strait Islander Communities in Australia.

2. IP PROTECTION AND INDIGENOUS CREATIONS

There has been a lot of discussion in recent years about the possible benefits that intellectual property protection offers for Indigenous communities. A recent comment by the WIPO Secretariat captured the tone of these discussions when in denying that intellectual property protection commodifies traditional knowledge, the Secretariat said 'to the contrary, one immediate consequence can be to empower [traditional knowledge] holders against the distorting use of elements of their identity, or against unauthorized commodification of their [traditional knowledge]. [Traditional knowledge] holders may, if they wish so, not only refrain from giving a commercial dimension to their [traditional knowledge], but they may also prevent others from doing so'.[9] As a result, the Secretariat concluded that an intellectual property 'regime will be of crucial interest for those [traditional knowledge] holders

information'. Frow, *supra* note 3.

9. WIPO/GRTKF/IC/5/8, 14, para 34.

who have a legitimate aspiration of 'commodifying' their knowledge or at least certain parts of it if they choose to commercialize'.[10]

There are a number of situations where intellectual property has been used in the exploitation of Indigenous technical, artistic and cultural creations in Australia. Indigenous artists in a number of Communities across Australia receive royalties for the uses that are made of their images protected by copyright. In some cases, the income stream that flows from the use of copyright works has been adapted to reflect Indigenous interests. For example, money received for the sale of prints depicting traditional stories which are produced by artists in Kubin, a Community based on Moa Island in the Torres Strait, is divided between the artist, the storyteller, and the Community. The traditional storyteller also decides whether or not and if so how the story is to be reproduced. The inclusion of the traditional custodian is an innovative way of ensuring that intellectual property is more closely aligned with indigenous interests. Indigenous Communities have also begun to derive a share of income from inventions derived from or based on traditional knowledge or the use of biological resources on Indigenous land. For example, a number of biodiscovery agreements have been negotiated between Indigenous groups and research bodies. While the terms of these agreements differ from case to case, they often include milestone payments and a percentage of any royalties that flow from biological based innovations payable to the Community. Researchers working with Indigenous Communities in North Queensland have also begun to explore the possibility of local Communities using plant breeder's rights to protect cultivars taken from wild plants traditionally used by Indigenous groups for food and materials.

Indigenous Communities have also used intellectual property laws to prevent the misuse and piracy of their artistic and cultural creations. This can be seen, for example, in *Foster v. Mountford*[11] where the law of confidential information was used to restrain the circulation of secret knowledge outside of an Indigenous Community. In particular, the Federal Court granted the Pitjantjara Council an ex parte injunction to restrain Rigby from publishing a book written by the famous anthropologist Mountford which described and analyzed the communal legends, spiritual secrets sacred sites, paintings, engravings, drawings and totemic geography of the Pitjantjatjara people. The injunction was granted on the basis that the information had been disclosed in confidence to Mountford some 35 years earlier.[12]

Indigenous artists have also turned to copyright law in an attempt to police the misuse of their creations. For example, in *Yumbulul v. Reserve Bank of Australia*,[13] Terry Yumbulul, an artist from Arnhem Land in North Australia, brought a successful action against the Reserve Bank of Australia for reproducing an image of the

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10. Ibid.
11. (1976) 14 *ALR* 71.
12. The book was prefaced with a caveat that read: 'Where Australian aborigines are concerned, and in areas where traditional Aboriginal religion is still significant, this book should be used only after consultation with local male religious leaders'. This helped the judge to find that the material was confidential.
13. (1991) 21 *IPR* 481.

Morning Star Pole on the 1988 commemorative ten-dollar banknote.[14] In turn, in *Milpurrurru v. Indofurn*[15] a group of Aboriginal artists brought a successful action against the defendants who had reproduced their artworks without permission on carpets manufactured overseas and imported them into Australia. In awarding damages for infringement of copyright, von Doussa J accepted that as Aboriginal law and custom would treat each of the applicants in the case equally it would be inappropriate to award separate judgments in favor of each of the applicants.[16] Accordingly he agreed that the judgment should be awarded to the plaintiffs as a group. In assessing the damages to be awarded, von Doussa J accepted that the artists and their communities should be compensated for the personal and cultural hurt they had suffered as a result of the copying. Accordingly an amount for cultural harm was included in the overall assessment of damages for the copyright infringement.

The decision of *Bulun Bulun v. R & T Textiles*[17] offers another example where copyright law has been used to prevent inappropriate uses of Indigenous art. This case arose out of the importation and sale in Australia of printed clothing fabric that infringed the copyright in the artistic work known as 'Magpie Geese and Water Lilies at the Waterhole' that had been painted by Johnny Bulun Bulun, a member of the Ganalbingu Community from Arnhem Land in northern Australia. In so far as this was a straightforward application of copyright law, the decision is relatively straightforward. What was noteworthy about the decision, however, was that the court held that Aboriginal artists may owe a fiduciary obligation to their community in relation to the exploitation of their artworks. While the Ganalbingu people were not involved in the creation of the work (at least in a way that is recognized by copyright law), nonetheless the court held that Bulun Bulun's relationship with the Ganalbingu people gave rise to a fiduciary relationship. This was because Bulun Bulun's use of ritual knowledge took place in accordance with community laws/customs and was predicated on trust and confidence. On this basis, the court held that equity imposed an obligation on the artist to preserve the integrity of the culture. If Bulun Bulun had not already brought the action, the court accepted that the Ganalbingu

14. There was a resolution of the claim between Yumbulul and the Reserve Bank, which unfortunately did not involve the Bank conceding to Yumbulul's claim for conversion damages in relation to the bank notes. But it still involved a gesture of recognition by the Reserve Bank towards Yumbulul and the payment of some money. Thereafter litigation ensued between Yumbulul and his then former agent who had negotiated the arrangements for reproduction for the Morning Star Pole. The matter concluded unsuccessfully for Yumbulul in a judgment of the Federal Court which was concerned basically with whether there was sufficient permission given by Yumbulul to permit the agent in question to allow for the work to be reproduced on the bank note. French J. concluded in the case that there was a mistaken belief that the copyright regime could impaste limitations on the use of the Pole similar to those which exist in Aboriginal law.
15. (1994) 30 *IPR* 209.
16. J. McKeough and A. Stewart, *Intellectual Property in Australia*, Sydney, Butterworths, 2004, p. 14.
17. (1998) 41 *IPR* 513.

people would have been entitled in their own right to equitable remedies (such as a constructive trust) against the defendant.[18]

Indigenous groups have also used trademarks to protect their artistic creations. For example, a number of Indigenous art collectives have registered trademarks to protect their reputation. The certification marks registered by the National Indigenous Art Agency in 2000 are a well-known example of the use of trademarks to protect Indigenous art. These marks, which are known as the *Labels of Authenticity*, are used to distinguish authentic Indigenous artistic goods and services from other products on the market.[19] The aim of these marks is to protect Communities against the growing number of non-Indigenous people who manufacture and sell Indigenous artefacts at the expense of Indigenous communities. Somewhat paradoxically, the relative success of recent copyright actions involving Indigenous art increased the need for the Labels.[20] This was because in response to decisions enforcing Indigenous copyright, pirates have shifted their attention away from the copying of individual works to the reproduction of styles of works: a matter which was thought to be particularly well suited to an Indigenous certification mark. The Labels are meant to ensure that consumers are able to identify authentic cultural products. This, in turn, is meant to improve the economic benefits that flow to Indigenous people from the commercial use of their culture.[21] The Labels are also intended to educate visitors and consumers about the different styles of Indigenous art from across Australia.[22] A further aim of the Labels of Authenticity is to enhance consumer confidence in the Indigenous arts and culture industry. As consumers become familiar with the characteristics that the Labels of Authenticity certify, they will be able to make better-informed choices about the Indigenous goods and services they purchase.[23]

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18. Indigenous artists have also utilized moral rights to protect their artistic creations. For example, a complaint was brought against the Olympic Museum in Lausanne who as part of its campaign to market the Sydney Olympics posted three Aboriginal artworks from the Balgo Community on its website. It also encouraged visitors to the site to download the images as wallpaper. After complaints were made, the artwork was removed from the website and money paid to the artists. A written letter of apology acknowledged the harm was also posted on the Museum's website (but later taken down).
19. The use of an authenticity label to protect Indigenous artistic and cultural products is not unique to Australia. In an attempt to protect Indigenous Inuit artists from imitations, the Canadian Government registered the symbol of the igloo as a trademark distinguishing original Inuit art. The Canadian Government also initiated the Co-operative movement in the North in an attempt to market arts and crafts. The artists produced their works of art and brought it to the Co-op. Once this was done it was up to the Co-op to place the Igloo Tag on the artwork. Conversation with B. Pottle, Research Officer, Inuit Art Centre, Ottawa, Ontario, 22 July 1999.
20. *See* e.g. *Milpurrurru v. Indofurn* (1995) 30 *IPR* 209 and *Bulun Bulun v. R T Textiles* (1998) 41 *IPR* 513.
21. Letter from the Chair, K. Mundine, *NIAA Discussion Paper* (August 1997), p. 3.
22. Ibid. p. 5.
23. It was also hoped that that Indigenous art practices will be promoted by having community exhibitions and producing books and pamphlets about different cultural areas. *See NIAA Discussion Paper*, *supra* note 21, p. 5.

3. IMPACT OF EXTENDING IP PROTECTION TO INDIGENOUS CREATIONS

Many of the problems associated with the general expansion of intellectual property rights have also been raised in relation to the use of intellectual property rights to protect Indigenous creations. For example a number of commentators have argued that Indigenous knowledge should not be commodified as the subject matter of intellectual property, 'nor should it be reduced and simplified to a set of economic rights'. In particular, it has been suggested that the application of intellectual property protection 'could be seen to diminish the cultural and spiritual value of [traditional knowledge], or even worse, distort its essential nature and transform it into a tradable commodity'.[24] It has also been suggested that intellectual property laws may, if wrongly applied, prove to be counterproductive, in so far as they 'promote division amongst Indigenous peoples, legitimize the historic appropriation of traditional knowledge, and perpetuate legal uncertainty'.[25] In a similar vein, commentators have also raised concerns about the impact that the translation of Indigenous art and authorship practices into Western categories may have for Indigenous cultural practices.[26] Somewhat cryptically, it has also been said that there 'is a point where a line must be drawn between the public domain and protected [intellectual property] … the realm of [intellectual property] protection should not be extended to a point where it becomes diffuse and legal certainty diluted'.[27]

Concerns have also been raised about the impact that intellectual property rights over Indigenous creations might have upon the public domain and in so doing upon the process of creativity more generally.[28] For example it has been suggested that the grant of intellectual property rights over Indigenous creations 'may stifle the ability of indigenous and traditional persons, as well as non-indigenous and non-traditional persons, from creating and innovating based upon tradition'.[29] It has also been suggested that intellectual property protection may have the 'the effect

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24. WIPO/GRTKF/IC/5/8, 12, para 30. Later, this is denied: 'to identify certain IP rights (whether general IP rights or *sui generis*) as applicable to the protection of some aspects of TK does not diminish or reduce the TK itself, nor the cultural heritage that sustains it … the fact that IP rights may be applied to TK subject matter need not impact the way in which TK is created and used in the originating community'. Ibid., 13, para 32-33.
25. B. Tobin, 'Redefining Perspectives in the Search for protection of Traditional Knowledge: A case study from Peru', 10(1) *Review of European Community and International Environmental Law* 47-64 (2001), p. 64.
26. C. Haight Farley, 'Protecting Folklore of Indigenous Peoples: Is Intellectual Property the Answer?', 30 *Connecticut Law Review* 1-57 (1997), p. 7.
27. WIPO/GRTKF/IC/3/11 (cited in WIPO/GRTKF/IC/5/3, Annex 2, 9-10, para 30).
28. 'The public domain diminishes, leaving fewer works to build upon … The consequence is that these laws may 'freeze' the culture in a historic moment, and deny traditional peoples a contemporary voice'. WIPO/GRTKF/IC/5/3, Annex 2, 9, para 29. Similar concerns have also been raised about the chilling effect that prior informed consent and disclosure of geographic origin (for patent and plant breeders rights) may have upon biological based research.
29. WIPO/GRTKF/IC/5/3, 6, para 23 (b). '[T]he public domain status of cultural heritage is also tied to its role as a source of creativity and innovation. Neither members of a cultural community nor

of casting [folklore] in concrete. Folklore may thus not be able to fully evolve and may risk its very existence, as it would lose one of its main features: its dynamics'.[30] The nature of these fears was summed up in the comment by WIPO that intellectual property protection for Indigenous creations could mean that:

> 'neither members of the relevant cultural communities nor the cultural industries would be able to create and innovate based on cultural heritage if private property rights were to be established over it … By overprotecting cultural expressions, the public domain diminishes, leaving fewer works to build upon … The consequence is that these laws may 'freeze' the culture in a historic moment, and deny traditional peoples a contemporary voice'.[31]

Confronted with this potential erosion of the public domain, many commentators have adopted the familiar response of calling for a balance to be struck between the interests of rights holders and those of the public domain. This can be seen, for example, in comments by the WIPO Secretariat who said that while 'an absolutely free and unregulated domain does not meet all needs of the indigenous and local communities',[32] nonetheless 'the establishment, in a general way, of property rights over all forms of [traditional cultural expressions] currently in the public domain is not appropriate, neither as a matter of intellectual property policy nor cultural policy'.[33] Instead, the Secretariat said that the central challenge was to address 'the protection of [traditional cultural expressions] in ways that balance the concerns of users, existing third party rights and the public interest'.[34] By ensuring that an appropriate balance was struck between these competing interests, this would mean that the interests of Indigenous communities would be respected while simultaneously ensuring that 'members of cultural communities as well as others are free to create and innovate on the basis of their cultural traditions, and acquire and benefit from any [intellectual property] that may subsist in the creations and innovations'.[35] While the Secretariat did not provide much guidance as to how this line was to be drawn, they did suggest that laws should exist that ensure that communities should be able to prevent uses outside of the community that falsely suggest a connection to community; or are derogatory, libellous, defamatory, offensive or fallacious uses, and uses of sacred or secret traditional cultural expressions. At the same time, the Secretariat said that any rights granted in traditional knowledge 'must be subject

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the cultural industries may be able to create and innovate based on cultural heritage if exclusive 'private property rights were to be established over it'. WIPO/GRTKF/IC/5/3, 4, para 15.

30. WIPO/GRTKF/IC/3/11 (cited in WIPO/GRTKF/IC/5/3, Annex 2, 9-10, para 30).
31. WIPO/GRTKF/IC/5/3, Annex 2, 9, para 29. As WIPO said, 'a clearer understanding of the role, contours, and boundaries of the 'public domain' is vital in the development of an appropriate policy framework for the [intellectual property] protection of [traditional cultural expressions]'. WIPO/GRTKF/IC/5/3, 4, para 15.
32. WIPO/GRTKF/IC/5/3, 6, para 23(c).
33. WIPO/GRTKF/IC/5/3, 6, para 23 (b).
34. WIPO/GRTKF/IC/5/3, Annex 2, 3, para 7.
35. WIPO/GRTKF/IC/5/3, 5, para 17.

to exceptions, such as use by third parties for academic or purely private purposes, or compulsory licences on grounds of public interest including circumstance of public health emergencies'.[36]

While WIPO, the European Union, and many others are happy to plough this familiar furrow,[37] others have adopted a more critical stance. In some cases, commentators have been critical of the public domain and the ideals that it embodies (or at least with the way the public domain is usually portrayed). In other cases the complaint is with a particular way of thinking about intellectual property that includes the public domain as one its key components, rather than with the public domain per se or with the extension of intellectual property rights. In order to be in a position to appreciate some of these problems, it may be helpful to pause and contrast the way knowledge is organized, classified and regulated within Indigenous communities with the way it is ordered within intellectual property law. However, rather than talking of Indigenous Communities in the abstract as if they were a standardized global entity, we will focus on the Yolngu peoples of Northeastern Arnhem Land in Northern Australia.

4. RECONFIGURING THE PUBLIC DOMAIN IN THE INTEREST OF INDIGENOUS CULTURES

In Yolngu culture, membership in a clan confers rights and obligations with respect to ownership of law and of *mardayin* (which is usually translated as customary law).[38] Rights to mardayin form the basis of rights in paintings (as well songs, dances, painting, sacred objects and knowledge about technology and medicine). Paintings, which are both part of the ancestral inheritance of clans and representations of the events of the ancestral world, play an important role in Yolngu culture. Many of the artworks depict creation stories, and are closely connected to land (or country). We can get some sense of the important role that artworks play in Yolngu culture from the decision of *Bulun Bulun v. R & T Textiles*.[39] As we mentioned above, the case centered on the artistic work known as 'Magpie Geese and Water Lilies at the Waterhole' which had been painted by Johnny Bulun Bulun, who is a member of the Ganalbingu people. The image of the waterhole depicted in the bark painting plays a significant role in Bulun Bulun's Community, notably because it was the place where Bulun Bulun's creator ancestor emerged. 'Magpie Geese and Water

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36. WIPO/GRTKF/IC/5/8, 53-4, para 137.
37. In a submission to WIPO the EU said that 'the fact that folklore for the most part is in the public domain does not hamper its development – to the contrary it allows for new creations derived from or inspired by it at the hands of contemporary artists'. Cited in WIPO/GRTKF/IC/5/3, Annex 2, 9, para 27.
38. Ownership of mardayin is usually shared between clans in the same moiety: the members of each clan possessing rights to mardayin which overlaps with the sets of mardayin belonging to clan. Frow, *supra* note 3, p. 42.
39. (1998) 41 *IPR* 513.

Lilies at the Waterhole' is the painting of the story of the creation of the Ganalbingu people. Under Bulun Bulun's law and custom, the creator ancestor emerged from the waterhole creating both the Ganalbingu people and the landscape. The creator also gave Bulun Bulun's ancestors the land, language, ceremonies, songs and dances. Importantly, the creator ancestor granted the Ganalbingu people their land on the condition that they continue to perform, maintain, respect and protect these rituals, songs, dances and images. Bulun Bulun gave evidence that as traditional owner under Ganalbingu law he was both permitted and obliged under custom and law to paint the ancestral creation story. In his affidavit, Bulun Bulun said:

> 'The creation of artworks such as 'At the waterhole' is part of my responsibility in fulfilling the obligations I have as a traditional Aboriginal owner of Djilubinyamurr. I am permitted by my law to create this artwork but also it my duty and responsibility to create such works as part of my traditional Aboriginal land ownership obligation. A painting such as this is not separate from my rights in my land. It is part of my bundle of rights in the land which must be produced in accordance with Ganalbingu custom'.[40]

Bulun Bulun's comments highlight the close connection that exists between Indigenous art and land[41]. Paintings are at once an ancestral charter to the land, a map of the land, as well as a story of how that land, and the people connected to the land, were created.[42] Bulun Bulun's remarks also remind us, as many commentators have noted in other contexts, that while the individual plays a pivotal role in Western intellectual property law, Indigenous law relies more on a collective model of ownership.[43] Bulun Bulun's comments also give us a sense of the differences between the types of activities that are regulated under Indigenous law than under copyright law.[44] Thus while copyright law recognizes the right to control reproduction and the right to communicate and issue copies of the work to the public, a number of different types of rights exist in relation to paintings in Yolngu culture.[45]

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40. (1998) 41 *IPR* 513, 518-9.
41. This is reflected in the fact that paintings have been accepted in Australian courts as evidence of the boundaries of Aboriginal land.
42. H. Morphy, *Ancestral Connections: Art and an Aboriginal system of knowledge,* Chicago, University of Chicago Press, 1991, p. 49.
43. J. Anderson, 'The Politics of Indigenous Knowledge: Australia's Proposed Community Moral Rights Bill', 27(3) *UNSW Law Journal* 585-604 (2004).
44. As Frow said, the regulation of cultural rights in Indigenous societies is in many respects more 'fully developed than any other way of thinking about the social ownership of information' Frow, *supra* note 3, p. 40.
45. A number of different factors are taken into account when deciding whether paintings should be released to those who potentially have rights of access to them. 'First, a clan must strike a balance between losing control of its paintings and mardayin through spreading knowledge of them too widely and losing knowledge of its paintings through failure to pass them on to succeeding generations. Second, a balance must be struck between maintaining control of its own painting and mardayin – the unique inheritance of its members from the ancestral past and so central to its identity – and releasing paintings to other clans as part of the process of recognizing and

These include the right (and obligation) to produce certain paintings, rights to the ownership of paintings, the right to divulge the meanings of a painting, the right to authorize or restrict the use of paintings, rights of knowledge that may be embodied in paintings,[46] and rights to discuss a painting without having produced the painting. To ensure that the exercise of these rights does not undermine the interest of other rights holders nor the Community more generally, traditional owners are also under a duty to consult with other traditional owners when the painting is reproduced. As the elder and artist Milipurrurru said, 'as an artist, while I may own the copyright in a particular artwork under western law, under Aboriginal law I must not use an image or a story in such a way as to undermine the rights all the other Yolngu who have an interest whether direct or indirect in it. In this way I hold the image on trust for all the other Yolngu with an interest in the story'.[47]

Another notable difference relates to the way knowledge is organized and categorized. While there are exceptions, intellectual property law draws a general distinction between three categories of knowledge. The first is information that is secret. With the exception of confidential information, such information is largely outside the remit of the intellectual property system. Here, the fate of the information depends on the ability of the parties to keep the information secret, or to use other legal regimes to provide suitable protection. The second category is information that is in the public domain, but is protected by intellectual property. This may mean, for example, that while third parties are able to read, draw inspiration from, or criticize a work, they are unable to copy or reproduce the work. A range of rules determine whether a work is protected, how long protection lasts, and the scope of protection. The third category of information is information that is in the public domain unencumbered by intellectual property protection. Here third parties are free, at least from the perspective of intellectual property law, to copy, mimic or use the work in whatever way they choose.[48] The scheme used to classify knowledge and information in intellectual property law is very different to that which is used by the Yolngu. While information in intellectual property law tends to be classified either as secret, private, or public, the spatial arrangements in Yolngu culture are not only organized according to different criteria, they are also more detailed and varied. In part, this is because while the context in which information is used and the status of individuals are taken into account in categorizing knowledge in intellectual property

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perpetuating social and spiritual links with them, Finally, from the prospective of male initiation, the senior generations of a clan must strike a balance between releasing knowledge of paintings and authority over them to succeeding generations of initiates and maintaining the restrictedness of the knowledge as a means of exercising control over the system. These factors operate on three dimensions: control versus release of knowledge, the independence versus interdependence of clans, and the passage of knowledge from one generation to the next.' Morphy, *supra* note 42, pp. 73-74.

46. Morphy, *supra* note 42, p. 58; Frow, *supra* note 3, pp. 42-43.
47. Frow, *supra* note 3, p. 45.
48. In many cases, intellectual property law attempts to shift information from the first to the second category. This is done on the basis that it is better for a party to be given a limited property right in the information, so long as the information can be used by third parties.

law, context and status play a much more prominent role in the Yolngu system.[49] This can be seen, for example, in relation to The Morning Star Pole, which was at the center of the dispute in *Yumbulul v. Reserve Bank of Australia*.[50] The plaintiff in this case, Terry Yumbulul, was an artist from Arnhem Land in North Australia. The Morning Star Pole is a ceremonial work that is imbued in tribal lore with the power to take the spirits of the dead to the morning star, which will then return them to their ancestral home. Yumbulul was given authority to paint the Morning Star Pole from his clan. However, before Yumbulul could reproduce these images, he had to pass though various levels of initiation and revelatory ceremonies in which he was counseled as to the nature of the designs and their spiritual meanings.

While there are exceptions, the fate of information under most areas of intellectual property is relatively clear-cut and unambiguous. Moreover, although information is able to migrate from one category to another, it is not usually capable of being repatriated to its home category. For example, it is possible for information that is secret to be subsequently protected by intellectual property. It is also possible for this information to fall into the public domain. However, once information is in the public domain, it can no longer be treated as 'secret'. While the status of information under intellectual property is (relatively) clear-cut, the fate of information under Yolngu culture is more ambiguous. In part this is because the status of information depends on the context in which it is revealed and the status of the recipient. As Morphy said, 'the place of secrecy in the Yolngu system is, to say the least, ambiguous, in that the system in no sense depends on secrecy per se but on control of context where secrecy can be continually re-created.'[51] Again, the *Yumbulul* decision provides us with a useful example of this. The Morning Star Pole, which had been reproduced on the ten-dollar note, had been sold to the Australian Museum in Sydney, where it had been placed on public display. The fact that the Pole had been displayed to the public did not, however, affect its status as a secret and sacred object. That is, while the Morning Star Pole had been on public display, nonetheless elements of the Pole remained 'secret'. In the same way in which a work can be made available to the public but still be protected by copyright law, the public display of the Morning Star Pole did not affect its status under customary law. This was because the intention of the display of the Pole was consistent with customary law which allows exhibitions in museums and galleries, so long as the purpose was to educate the wider population as to the nature of Indigenous culture.[52]

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49. This is because Yonglu art is part of a system of restricted knowledge in that 'not all people appear to have equal access to the knowledge contained within it'. Secrecy intervenes 'to affect who can learn what'. Morphy, *supra* note 42, p. 75.
50. (1991) 21 *IPR* 481.
51. Morphy, *supra* note 42, at xiv.
52. The division of the Morning Star Pole into different domains in Indigenous law is similar to the way copyright law divides objects up into different parts. This is reflected in the familiar adage that while ideas in a book in the public domain are available to be used by anyone, the way these ideas are expressed is not.

Another important difference between intellectual property law and Indigenous customary law relates to the ideals and objectives that underpin the two regimes. In part, this is a consequence of the fact that they are premised on, and embody, a different aesthetic; there are differences, for example, in terms of the models of creation, the sources of creativity, and the assumptions made about why someone may create a work in the first place.[53] There are also differences in terms of the activities and practices that are privileged and prioritized. One of the most important manifestations of this is in terms of the way information in the 'public domain' is viewed. As we mentioned above, the provision of a healthy and dynamic public domain is an important priority of the intellectual property system. The availability of public domain resources, which may be 'mined by any member of the public', is seen as to facilitate and promote creativity.[54] While intellectual property law aims to ensure that information is placed in the public domain once existing rights are exhausted, in contrast 'Indigenous cultural systems are not built upon a principal of open access but are highly regulated and restricted: they are built upon secrecy as much as openness'. As well as making the imposition of intellectual property law onto Indigenous practices problematic, the Indigenous approach to 'public' information also goes against the grain of our expectation of what a public domain in information should look like.[55]

The different approaches that are taken towards 'public' information also gives rise to a series of tensions when the public domain of Western legal systems comes into contact with Indigenous culture. This is reflected in the fact that historically, the application of public domain ideals has created a number of problems for Indigenous Communities. There is no reason why, if left unchanged, this would not continue to occur in the future. For example the idea that the duration of intellectual property rights should be limited (to promote and encourage creativity) poses problems for Communities that wish to protect traditional knowledge. The lack of protection over style means that a Belgian Company (trading as Australian Home Made Ice Cream) is are able to use Indigenous music, symbols and images as a part of its marketing strategy.[56] It also means that non-Indigenous traders are able to sell 'Aboriginal' artefacts manufactured overseas and decorated by European backpackers with Indigenous style motifs and patterns to tourists. Biological resources collected in flagrant breach of local laws, rules and customs were often justified on the basis that such resources were part of the global commons, until they were manipulated or isolated by scientists in which case they fell within the remit of the intellectual property system. Many of the acts of biopiracy that have occurred in Australia (and elsewhere) have been carried out by academic scientists under the banner of 'academic

53. *See* R. Lettington and K. Nnadozie, 'A Review of the Intergovernmental Committee on Genetic Resources, Traditional Knowledge and Folklore at WIPO', *Trade-Related Agenda, Development and Equity* (Occasional Paper No. 12, South Centre, Dec 2003), para 74.
54. Litman, *supra* note 2, p. 974. *See also* WIPO/GRTKF/IC/5/3, Annex, 10, para 33.
55. Frow, *supra* note 3.
56. *See* www.homemadeicecream.com

freedom' and not, as many presume, multinational corporations motivated by profit.[57] There are also a number of situations where anthropologists and archaeologists have relied on public domain ideals to promote their own interest at the expense of Indigenous communities.[58] In the same way as intellectual property owners have been criticized for promoting a romantic image of the author as an isolated genius, proponents of an Indigenous public domain can also be criticized for promoting a nostalgic, unrealistic view of the commons. Given this, it is not surprising that commentators have suggested that rather than seeing the public domain as a positive, productive space akin to the commons (*res communis*), a better parallel, from an Indigenous perspective, might be that of *terrae nullius*. This is the idea of a land without people which was used by British colonial authorities to deny local Indigenous peoples in Australia any interest in land or country.[59]

Given the differences that exist between the Indigenous aesthetic and that which underpins Western intellectual property law, and the ways in which public domain ideals have been used as tools of exploitation and colonization, it is not surprising that Indigenous groups have been critical of the public domain and the application of intellectual property to Indigenous creations. As Tobin said, the application of 'the occidental legal concept of the public domain as the defining factor in limiting rights of indigenous peoples to control the use of their traditional knowledge threatens to legitimize the historical unapproved and uncompensated expropriation of traditional knowledge'.[60] If we are to take Indigenous issues seriously it is clear that we need to reject proposals that simply attempt to balance private and public interests.[61] Instead, what is required are 'innovative proposals and a healthy disregard for existing legal tradition, especially where tradition has fostered the historic expropriation of indigenous property'.[62] More specifically, it is necessary to reconfigure the public domain so that it supports and fosters, rather than undermines, Indigenous interests. That is, it is necessary to create and recognize the domains established under customary or indigenous law as new spaces within the legal landscape, rather than merely applying spatial configurations developed in other contexts to Indigenous creations.[63]

This is not as novel as it first may appear. Indeed, a growing number of (sympathetic) commentators have begun to question the appropriateness of the way the

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57. Most examples of innovative benefit sharing (at least in Queensland) have come from public sector organizations (such as the Australian Institute for Marine Science) or from multinational companies (such as Astrazeneca).
58. *See* M. Brown, *Who Owns Native Culture?*, Cambridge (Mass.), Harvard University Press, 2003.
59. *See* W. Van Caenegem, 'The Public Domain: Sceinta Nullius?', 24(6) *EIPR* 324-330 (2002).
60. Tobin, *supra* note 25, p. 55.
61. Ibid. Tobin also argues that it is necessary to develop 'new legal guidelines for defining the boundaries between the private property rights of indigenous peoples over their traditional knowledge in the public domain'.
62. Tobin, *supra* note 25, p. 55.
63. *Cf.* WIPO/GRTKF/IC/5/3, Annex 2, 7-8, para 23 (admitting that the public domain 'does not take account the private domains established by customary or indigenous law').

public domain is configured in contemporary legal debates. It is increasingly common to read that there are many public domains rather than a single public domain. Commentators have also begun to question the neat distinction that is drawn between 'public/open' and 'private/closed'.[64] For example, it has been said that the public sphere 'spoken of respectfully in traditional science' is 'less than it appears, being in fact analogous in some ways to a limited-membership, shared-access common area than a truly wide-open, unclaimed space'.[65] Questions have also been raised about the ideals that underpin the public domain, or at least the way these ideals are best achieved. Indeed, one of the notable trends in recent years is the way in which questions have been raised about whether the goals of the public domain are only to be achieved by providing unfettered access to information. This is reflected in the idea that restrictions placed on the dissemination and expression of information – such as trade mark protection over the phrase 'free for educational use' or a prohibition on the commercial use of shared biological materials[66] – may protect the public domain and thus add to the quantity and quality of material that is ultimately available to the public.[67] This is also the case with the Creative Commons and Open Source projects that utilize copyright protection to promote public ends.

In thinking about how to reconfigure the public domain to take account of Indigenous spaces, it is important that we consider the *processes* by which these domains are to be recognized: a topic that has largely been ignored in debates about Indigenous intellectual property which tend to be preoccupied with the means of production and consumption. In developing these new spaces, one issue that needs to be considered is how and where the lines that must inevitably be drawn are to be configured. It is necessary to decide, for example, who is to benefit from any new legal regime, from the scope and duration of protection, and so on. In an Australian context, this would mean deciding, for example, whether any new laws should extend to urban as distinct from traditional artists. It would also mean deciding the types of knowledge that might be protected. One response to problems of this nature is to adopt neutral abstract language that largely transcends the need for boundary setting. This is the approach that is currently being favored by WIPO, which seems to be moving towards an unfair competition style law as the basis for a future Treaty on traditional knowledge. While this may offer a solution to the difficult problems facing WIPO, it simply defers the question of boundary setting to the national level. In thinking about how these issues are to be resolved, it is important that that 'indigenous and

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64. R. Merges, 'Property Rights Theory and the Commons: The Case of Scientific Research' in E. Frankel Paul, F. Miller & J. Paul (eds.), *Scientific Innovation, Philosophy, and Public Policy*, Cambridge, Cambridge University Press, 1996, p. 147. *See also* E. Ostrom, *Governing the Commons*, Cambridge, Cambridge University Press, 1990.
65. Merges, *supra* note 64, p. 146.
66. For example, the US based Uniform Biotechnology Materials Transfer Agreements (UBMTA) places limitations on the use that can be made of research tools created with public funding. More specifically while it places few restrictions on non-profit to non-profit transfers, it prohibits transfers to organizations who intend to use the material for commercial ends. *See* Merges, *supra* note 64, p. 159.
67. Merges, *supra* note 64, p. 166.

local communities must be involved from the outset in establishing the parameters for any process to regulate their rights'. In particular, it is important that Communities play a role in deciding issues of definition, ambit, and content.[68]

A number of consequences flow from this. Ideally, it means that Indigenous communities, rather than State agencies or international organizations, should decide both the questions that potentially affect them, as well as how these questions are to be answered. That is, we should be wary of proposals that presume that once a State agency or an international organization has made the normative decision to support and protect Indigenous culture that the next step is for them to pose and answer a series of follow-up questions.[69] The history of Indigenous interaction with Western institutions provides many examples where well-intentioned, well-meaning public agencies – whether State or Church based – made decisions on behalf of Indigenous Communities that ended up having adverse, negative consequences. Thus while we would agree that in thinking about how intellectual property law should be changed to accommodate Indigenous interests that a range of issues need to be resolved,[70] we do not agree with the related presumption that it is for WIPO or some other State agency to answer these questions.[71] Rather, these are matters that are best left to Indigenous Communities to resolve.[72] To impose paternalistic schemas on Indigenous peoples would, as one commentator noted, 'be conducive to what has been called the final colonization – colonization of the product of their intellectual effort'.[73] Another consequence of this is that proposals, such as public

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68. Tobin, *supra* note 25, p. 59.
69. In looking at the approaches to defining core intellectual property concepts, WIPO focused on the relationship between international and national agencies: little or no attention was given to the role of local interests, WIPO/GRTKF/IC/5/8, 17 ff.
70. For example, there might be a 'need to redefine the moment at which traditional knowledge is deemed to become part of the public domain, and therefore no longer subject to control by indigenous peoples'. Tobin, *supra* note 25, p. 56.
71. In looking at a possible *sui generis* system WIPO set itself the task of 'to identify the general features of an adequate *sui generis* system for the protection of traditional knowledge' and also 'to identify the elements that system must contain in order to be effective'. To identify those elements the WIPO Secretariat said that 'one has to provide responses to several essential questions to which any effective legal system for the protection of property rights must be able to respond to satisfactorily. WIPO/GRTKF/IC/5/8, 47, para 117. These were: what is the policy objective of the protection; what is the subject matter, what criteria should this subject meet to be protected; who owns the rights, what are the rights, how are the rights acquired, how should the rights be administered and enforced; and how are the rights lost or how do they expire? WIPO/GRTKF/IC/5/8, 47-57, para 118-146. The problem is not necessarily with the questions per se, but with the presumption that they need to be answered by a central agency: whether it be an international, regional or national organization.
72. Similar principals been used in discussions about how to reform patent law to protect the scientific commons. As Merges said, when pursuing policy goals to promote scientific research we should 'show respect for the internal rule of the scientific community' that we 'should look how the practice under scrutiny evolved in the community, and how it affects the overall functioning of the community, instead of bluntly requiring that science adhere to the naïve baseline of total and immediate public dissemination'. Merges, *supra* note 64, p. 166.
73. Tobin, *supra* note 25, p. 63.

domain statutes, *domaine public payant* or global Indigenous collecting societies, which require central (state based) mechanisms to police, collect and monitor the public domain, may not be appropriate.[74]

While it is important that Indigenous communities be given the opportunity to determine the rules that regulate and protect their culture, science and technology, at the same time it is important that we recognize the limits of local and customary laws. In particular, we need to accept that acts of piracy will be carried on outside the reach or jurisdiction of customary law. Here the challenge is to formulate a regime that enables local laws to articulate with national and international regimes. In turn, this requires a distinction to be drawn between those matters that can be left to Indigenous Communities to resolve and those issues that require a broader framework. It is also important that we recognize that many Indigenous communities have limited resources available to protect and enforce their rights.

One of the problems with many of the solutions that have been proposed to protect Indigenous art, science and technology is that they adopt a model of regulation that is inappropriate to the needs of Indigenous Communities. In part this is because most, if not all, of the proposed solutions tend to advocate reform of copyright, patents or moral rights, or the introduction of a *sui generis* system that is modeled on these forms of intellectual property. The problem with many (but not all) of these proposals is that they require Indigenous Communities to expend limited resources in the policing of their rights.[75] Another problem with these proposals is that they inevitably require a centralized agency to draw boundaries and to make decisions that are better left to Indigenous Communities to decide.[76]

One alternative that does not succumb to these problems as readily (although it does have a number of problems of its own) is for Indigenous creations to be protected via a regime modeled on the laws used to protect geographic designations.[77] Geographical indications could be used in two ways. Firstly, it is possible for Indigenous creations to be protected as geographical indications of origin. While geographical indications are usually granted over agricultural products, they have been recognized for non-agricultural products (such as Swiss watches). Secondly, and more ambitiously, the regimes used to protect geographical indications could be used as a model for a *sui generis* scheme to protect Indigenous knowledge. One advantage of using a law that is modeled on geographical indications is that it offers a way of ensuring that Indigenous law is incorporated into the legal regime used

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74. For criticisms, *see* Haight Farley, *supra* note 26, p. 49.
75. A notable exception being in relation to prior informed consent and disclosure of geographical origin as a condition for grant of patent and plant variety rights.
76. For example, WIPO said that it needed 'to define the 'communities' that would be entitled to special protection', WIPO/GRTKF/IC/5/3, Annex, 14, para 42 (d).
77. A number of different legal regimes have been used to regulate the name of products (and indirectly also the product itself) including indication of source, geographical indication of origin, and appellation of origin. Here, we have used the generic term geographical indication of origin as a shorthand for these different regimes. *See further*, L. Bentley and B. Sherman, *Intellectual Property Law*, Oxford, Oxford University Press, 2004, pp. 962-989.

to regulate Indigenous culture.[78] In the same way in which collectives (such as the Parma Ham Consortium) set their own internal rules that dictate when and how the name of a product can be used, so too Customary law could set the parameters and define the scope and ambit of protection over local knowledge. This accords with the idea of self-determination, while recognizing that such laws must articulate with broader frameworks. It would also enable Indigenous Communities to decide who was to benefit from protection, as well as when and in what circumstances knowledge could be used by third parties.

Another advantage of using geographical indications of origin is that it provides a means of recognizing the connection to 'place' or 'country' that is so important for many Indigenous Communities. One of the features of geographical indications of origin is that it requires a connection between the product in question and the place from which the product originates. Many of the regimes used to protect geographical indications of origin are based upon the idea that the protected product is an embodiment of the location from which it originates. Perhaps the most well known example of this is the notion of *terroir*, the French concept used to describe the characteristics or attributes of a place, resulting from the land, soil, geography, climate, human and seasonal influences which contribute to the unique characteristics of wine. *Terroir* is similar to, but not as broad a notion as, the Aboriginal idea of connection to place.[79]

Unlike many other forms of intellectual property protection, a law modelled on geographical indications recognises collective rights. Often the parties will form collectives or more formal bodies, such as the well known French winegrowers association in Provence *Comite Interprofessionnel des Vins Cotes de Provence*,[80] to protect their traditional aims and objectives. This form of association could be adapted to reflect the community-based approach to Indigenous traditional knowledge and culture. One of the advantages of this is that the rules or laws that govern Communities would largely be decided by the communities themselves, rather than imposed by outside parties. It could also be done in a way that allows Indigenous law to evolve and change over time. Yet another advantage of using geographical indications of origin as distinct from other forms of intellectual property as a model for protection is that it provides a means of protecting traditional knowledge (in the strict sense of the word). Indeed, one of the features of many of the regimes used to protect geographical indications of origin is that they are concerned with rewarding

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78. It has also been suggested that the 'principle of locality' should be applied to the protection of indigenous culture and IP rights: 'the solution is to resolve any disputes over the acquisition and use of indigenous people's heritage according to the customary laws of the indigenous peoples concerned'. E. Daes, 'Defending Indigenous peoples heritage' (February 2000), cited in WIPO/GRTKF/IC/5/8, 42, para 105.
79. The Kauma people from the Adelaide Plains use the term '*pangkarra'* to describe the characteristics of a particular place. *See* Max Allen, 'Terroir Australia', *The Weekend Australian Magazine*, (13 Dec 2003), p. 48.
80. Who successfully sued a Tasmanian wine grower for the using the word Provence on their wines: *Comite Interprofessionnel des Vins Cotes de Provence & Anor v. Stuart Alexander Bryce & Anor* [1996] 742 FCA 1 (23 August 1996).

traditional cultural values and knowledge rather than promoting innovation per se, as is the case with most of the other forms of intellectual property. Another important advantage of geographical indication style protection over other forms of intellectual property is that there are no specific limitations on the period of protection.

There are a number of problems that would have to be overcome before geographical indications of origin could be used either directly as a form of protection or indirectly as a model for *sui generis* legislation. In particular, there would have to be a dramatic change of heart by policy makers in Australia and elsewhere (who seem to think of geographical indications of origin as a new form of European colonization). Given that the objects and knowledge that would be protected under these regimes usually span a number of different Indigenous Communities, it would also be necessary for Communities to decide amongst themselves issues such as who had authority to negotiate and how benefits were to be shared. Even if problems of this sort were overcome, we need to remind ourselves that geographical indications of origin can only ever provide a partial solution. If Indigenous knowledge and creations are to be properly protected, a raft of changes is required: both legislative and non-legislative, legal and extra-legal. A useful starting point must be to question the assumptions that we habitually bring to bare when thinking about intellectual property. One of these must be the way think about the public domain and the central role that it plays in most thinking about intellectual property law and policy.

Chapter XII

The Commercialization of Public Sector Information: Delineating the Issues

Mireille van Eechoud

The past decades have witnessed an increasingly 'market-oriented' approach to the production and dissemination of public sector information. It has led to concern on the part of the private sector about unfair competition. It triggers fear about the accessibility of data, both in terms of availability and affordability. Freedom of information campaigners worry about the impact on the access rights which serve democratic accountability. The so-called commercialization of government information thus raises a variety of concerns. In order to be able to assess the validity of these concerns, and of the regulatory means to address them, it is necessary to first describe which models of production and distribution make up this 'commercialization'. The focus will be on the situation in the European Union (EU), notably the United Kingdom and the Netherlands, which exemplify different commercialization policies. These national policies, as well as the principles enshrined in the EU Directive of 2003 on the re-use of public sector information[1] will be compared with US federal policy on access to and exploitation of public sector information. From a European point of view, the policy followed in the US tends to be regarded as favorable to the public domain. To conclude some suggestions are made as regards possible means to prevent or correct negative consequences of commercialization.

The assumption that there is a trend toward the commercialization of public sector information merits closer scrutiny. What is meant by public sector information? What organisation models are indicative of a market-oriented rather than a public task oriented information supply? If it is true that government organisations strive to generate income with the production or distribution of information they collected or generated, does that necessarily have a negative impact on the 'public domain'?

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1. Directive 2003/98/EC of the European Parliament and of the Council of 17 November 2003 on the re-use of public sector information, *OJ* 2003 L345 [hereafter PSI Directive].

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 279–301

What instruments play a role in stimulating access to and re-use of public sector information? How can these be used to secure the public domain?

1. DELINEATING THE FIELD

1.1. DEFINITION OF PUBLIC SECTOR

There is of course no universal definition of 'public sector'. For our purposes, the functional definition of the Directive on the re-use of public sector information will serve as reference. This definition is in turn taken from the directives on public procurement[2] and defines 'public sector body' in Article 2 as: 'the State, regional or local authorities, bodies governed by public law and associations formed by one or several such authorities or one or several such bodies governed by public law'. A *body governed by public law* is any body that meets three cumulative criteria: 1) to be established for the specific purpose of meeting needs in the general interest not having an industrial or commercial character, 2) to possess legal personality and 3) to be closely dependent – as regards financing, management or supervision – on the State, regional or local authorities or other bodies governed by public law.

In a number of rulings,[3] the European Court of Justice (ECJ) has clarified what a 'public sector body is' under the above definition. 'Legal personality' refers to bodies under both private and public law. It is also settled case-law that 'needs in the general interest, not having an industrial or commercial character… are generally needs which are satisfied otherwise than by the supply of goods and services in the marketplace and which, for reasons associated with the general interest, the State chooses to provide itself or over which it wishes to retain a decisive influence.' To determine whether are not there is a commercial character all facts and circumstances must be taken into account, such as 'a lack of competition on the market, the fact that its primary aim is not the making of profits, the fact that it does not bear the risks associated with the activity, and any public financing of the activity in question.'[4] A body whose activities in the general interest only constitute a relatively small proportion of the total activities can nonetheless be a body governed by public law in the sense of the Procurement Directives and thus PSI Directive.[5]

In the field of government information, the ECJ ruled in *Mannesmann* v. *Strohal* that the printing of official administrative documents by the *Österreichische Staatsdruckerei* is a such a need operated in the general interest, not having a commercial character.[6] Other examples of public bodies falling under the PSI Directive

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2. Directive 93/37/EEC, *OJ* 1993 L 199/54, and Directive 92/50/EEC, *OJ* 1992 L 209/1.
3. Case C-360/96 *BFI Holding* [1998] *ECR* I-6821; Case C-44/96 *Mannesmann* v. *Strohal* [1998] *ECR* I-73; Case C-214/00 *Commission* v. *Spain* [2003] *ECR* I-4667; Case C-373/00 *Adolf Truley* [2003] *ECR* I-1931, and Case C-18/01 *Korhonen* [2003] *ECR* I-5321.
4. Case C-283/00 *Commission* v. *Spain*, [2003] *ECR* I-11697 (at 81).
5. *Mannesmann* v. *Strohal*, *supra* n. 3 (at 25).
6. *Mannesmann* v. *Strohal*, *supra* n. 3.

definition would include data selling companies, such as those owned and operated by the Dutch Land Registry (Kadata) and the combined Chambers of Commerce (NV Databank). The so-called 'trading funds' – which are an important feature of the UK's public information infrastructure – also qualify as public sector bodies under the Directive. Other bodies that will typically fall under the above definition are universities and schools, public broadcasting companies and executive non-departmental public bodies that carry out executive and/or commercial functions such as the British Library and British Museum. However, Article 1(2) puts education, research and cultural establishments outside the scope of the PSI Directive.

1.2. TYPES OF GOVERNMENT INFORMATION

The public sector holds such a vast amount of disparate information that it may be helpful to use some sort of categorization. A distinction is made in Dutch policy documents on improving access to public sector information between research data, public registers, administrative data, and auxiliary data.[7]

This categorization is useful for our purposes because by and large it corresponds with the way production and publication of data is organized in the public sector. Research data and public register data are often held by relatively independent public bodies, which increasingly have to operate their secondary (sometimes also their primary) activities under a cost recovery model. These may be executive agencies such as the Dutch Royal Meteorological Institute (KNMI), or be even more remote from departments as are non-departmental public bodies like the Dutch Land Registry, and public-type companies such as the UK's trading funds, among which are the Ordnance Survey and Companies House. Generally speaking, the more independent such a public body is from the (central) government, the more likely it is to operate under a cost recovery scheme, which may include authorization for making a 'fair' return on investment, or even an instruction to do so. Administrative data and auxiliary data are present throughout the public sector at the national and local level.

Research data comprises the information collected by public organisations, the key task of which is to collect data for use by others. The primary customers of these organisations are different parts of government, which use the data in policymaking and administration. Their secondary customers are international governmental organisations and the public at large, including private sector companies that use the data as input for information products and services. Examples are national bureaus of statistics, meteorological services (Met office, KNMI), hydrographic services and mapping agencies such as the US Geological Survey.

Public register data covers, as the name suggests, the public registers that are held on the basis of specific laws and regulations. Their purpose often lies in enhancing

7. BDO Consultants, *Elektronische bestanden van het bestuur* (Electronic databases of the public sector), Study for Dutch Ministry of the Interior, The Hague, 1998.

security in (legal) relations. Examples are company registers, intellectual property registers, population registers, vehicle registers, and the land registry or cadastres. Aggregate data from such public registers is also a valuable source of information for public sector policy-making. Although their name suggests otherwise, public registers are not necessarily generally accessible, due to privacy concerns (data protection). On the whole however, broad access is consistent with the purpose of the registers. The same is true for *public records*, comprising laws and regulations, court decisions, minutes of meetings of legislative bodies (national and local), etc. Where access to public registers is typically regulated by specific statutes, public records may be accessible on the basis of freedom of information laws and instruments dealing with archives. Access free of charge or at a maximum cost of reproduction is typically the rule for such information.

Administrative data results from the exercise of a particular administrative task of a public sector body that is directly aimed at citizens or companies. These include tax registers, police registers, social security files, and zoning permissions. Data protection law – at least in EU countries – will often bar access to this type of data for other government organisations and particularly for the private sector.

Auxiliary data comprises information not belonging to any of the above categories. This data is collected (internally or externally) and enhanced to support policymaking or the execution of government policies.

Public sector information that is not represented in the categories mentioned above is information produced in education and academic research, or by publicly funded cultural and audiovisual institutions. It is not clear why these institutions have been disregarded. One reason may be that this sector concerns a mixed category of institutions ranging from those that are independent from government other than for subsidies to those that have been set up under public law with a specific public task. A probably more important reason is that their basic function is the creation and/or transfer of knowledge or information to society at large. This implies that policies for broad access are already in place, as an integral and essential feature of the way these institutions work. The latter may also be what the PSI Directive is referring to where it explains that education, research and cultural establishments are excluded from the scope of the directive because 'their function in society as carriers of culture and knowledge give them a particular position.'[8]

According to some recent studies on the demand for various types of government information, geographic information has a particularly big potential for commercial re-use. This information primarily falls within the category of research data, but it may also fall in the category of public registers and to a lesser extent in the other categories. Information contained in public records, such as company registries and intellectual property registrations, is also considered commercially interesting, as is legal information.[9] That geographic information and public registers are regarded

8. Explanatory Memorandum to the Proposal for a Directive on the re-use and commercial exploitation of public sector documents (COM (2002) 207), at 6.
9. PIRA, *Commercial Exploitation of Europe's Public Sector Information,* report for the European Commission, DG Information Society, Brussels 2000, p. 10; Berenschot and Nederlands

by the government and the private sector as the most promising sources for the development of value added products and services, could well be due to the fact that much other information is subject to data protection laws and therefore not freely exchangeable. I will not go into the effects of data protection on the commercial use of government information,[10] as it is part of the wider issue of commercial use of personal data, which is addressed elsewhere in this volume.

2. OVERVIEW OF MARKET-ORIENTED TENDENCIES

In the countries of the European Union, the quest for a leaner and more efficient public sector has been on going with varied intensity since the 1980s. This trend has also affected the supply of public sector information. Various organisation models are used to achieve greater efficiency, both in terms of reducing the cost of production of data and regulating demand by making the cost of use of data visible. Decentralization is the least far-reaching model, whereas privatization is the most far-reaching, with public-private partnerships (including outsourcing) in the middle. Below is a sketch of these developments in the government information sector, with examples taken mostly from the UK and the Netherlands.

2.1. DECENTRALIZATION

In the Netherlands, parts of the central administration entrusted with an important information-supplying task were initially encouraged to generate greater income from users of their information, both in the public and private sectors. To give them more flexibility, some of them were transformed into executive agencies (e.g. National Bureau of Statistics, National Royal Meteorological Service, Topographic Service). Some were brought one step further from under the responsible department's wings, and turned into non-departmental public bodies (NDPB). Such a *zelfstandig bestuursorgaan* is a separate public legal entity with its own budget and (limited) regulatory powers. An example of an executive agency that became independent is the Land Registry/Cadastre (*Kadaster*), which holds the public records on real estate and co-produces (digital) large-scale maps of the entire country. The combined Chambers of Commerce, which maintain the national company register through their

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Economisch Instituut (Dutch Economics Institute), *Welvaartseffecten van verschillende financiersmethoden van elektronische gegevensbestanden* (Welfare effects of various methods of financing electronic databases), report for the Dutch Ministry of Internal Affairs, The Hague, 2001.

10. The reverse, namely the use of commercial (personal) data obtained from the private sector by the public sector is an area of growing concern, particularly in the US, due to computer security issues and increased access for national security reasons (anti-terrorism), *see* for instance: J. Dempsey and L. Flint, 'Commercial Data and National Security', 72 *George Washington Law Review* 1459-1502 (2004).

joint company NV Databank, have long had the status of non-departmental public body. With the introduction of a cost-recovery scheme for each type of activity of the Chambers, NV Databank started charging all its customers from both the private and public sectors.[11] A similar development characterizes the operations of the vehicle registry since it was transformed into a NDPB.[12]

In the United Kingdom, large information producing public sector bodies have also been 'decentralized'. In recent years, major information collecting and disseminating bodies have acquired trading fund status, including the Companies Registry, Land Registry, Ordnance Survey, Meteorological Office, UK Hydrographic Office, Driver and Vehicle Licensing Agency and the Patent Office.

Trading funds are (parts of) departments, which do not require that their annual budget be voted by parliament. They generate their own income and – in principle – retain these revenues; they are also allowed to borrow. They must in principle charge for the full cost of services they provide (cost recovery model). It is possible for a trading fund to seek profits, i.e. when it provides goods and services in competition with other suppliers. It may also be specifically authorized to charge what the market will bear ('market prices').[13] Trading funds are not as far at arms length from central government as public corporations or nationalized industries. The responsible minister is accountable to parliament not only for general policy but also for all aspects of its operations and activities.[14]

Cost recovery models are a frequent, but not necessary feature, of decentralization. They do not necessarily imply that government information becomes less accessible to citizens and businesses because of higher prices. On the contrary, if the decentralization effort is successful in terms of increased efficiency and better customer service, it may well lead to higher quality data at cheaper prices. For example, prices dropped substantially in the first few years after the Dutch land registry was made an NDPB.

2.2. PRIVATIZATION

In this context, privatization denotes the complete transfer of the production or distribution of certain information from the public to the private sector. This implies that, at the political level, the choice has been made that a particular activity is no

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11. The charging policies and organization of the Chambers of Commerce are currently under review, pending which fees are not to be increased, *Kamerstukken II* (Records of the Senate) 2004-05, 30 217, no. 1.
12. M. van Eechoud, J. Kabel, *Prijsbepaling van elektronische overheidsinformatie* (Pricing strategies for electronic public sector information), Deventer, Kluwer, 1998, p. 16, 24 ff. Public bodies that maintain registers generally distinguish the activity of supplying data from the register from the activity of registration (i.e. the party that needs to have information registered is charged and the party that receives information from the register is charged).
13. *Guide to the establishment and operation of Trading Funds*, London, UK Treasury Department, January 2001.
14. Guide to the establishment and operation of Trading Funds, *supra* note 13, at 1.5.2.

longer considered to be a public task. Such policy choices may be based on changed perceptions of the role of government, but can also be based on (unfair) competition concerns. This was the case in the recent overhaul of the activities of the Dutch Royal Meteorological Institute (KNMI). Partly because private businesses complained that the KNMI increasingly entered into competition with them, the KNMI had to cease all 'commercial' activities completely.[15]

In the UK, the recent plan to turn the Ordnance Survey from trading fund into a state owned company was dropped after it drew fierce criticism. The relevant select committee in the Commons considered it unwise to subject the mapping agency to a legal framework designed for commercial activity, when it was unclear where the Ordnance Survey's public tasks end and commercial activities begin.[16]

Full-blown privatization does not seem to occur often where public sector information is concerned. Typically the government will want to maintain some influence on the institution, because it has an interest in the quality and reliability of the supply of information. A transfer to the private sector does not necessarily have a negative impact (or any impact at all) on the public domain. Particularly if the transfer concerns activities that are privatized on the grounds that they compete with private sector services. The impact may well be negative if it involves a transfer of a (near) public monopoly to a private monopoly. This is what happened in the context of exclusive public-private partnerships on remote sensing in the US (the Land sat debacle) and on a database containing all central government legislation in the Netherlands (Kluwer database).

2.3. PUBLIC PRIVATE PARTNERSHIPS

The attempt to manage public sector information more efficiently by enlisting the aid of the private sector has in the past led to some poor policy choices. But whether or not the shift to a public-private partnership (PPP) adversely affects access of course depends on the particulars of the agreement.

In the 1980s, the Dutch central government concluded that its efforts to create and operate a database system containing all (consolidated) legislation were not successful, and that the development and maintenance of such a database could best be left to the private sector. A consortium led by Kluwer, market leader in legal information publishing, was awarded a 10-year contract. For a set price, the consortium would build the system and give access to its content to the departments of central

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15. *Wet op het Koninklijk Meteorologisch Instituut*, *Staatsblad* 2001, 562; *Regeling beschikbaarheid algemeen weerbericht en KNMI-gegevens, prijs KNMI-gegevens en nadere regeling KNMI-taken en -raad* (Regulation on the availability of a general weather forecast, the price of KNMI data and further regulation of KNMI tasks and Council), *Staatscourant* 2002, 214. In effect, a market started to develop for meteorological services, which previously had been offered almost exclusively by the KNMI.
16. *Government's Response to the Transport, Local Government and the Regions Select Committee's Tenth Report on Ordnance Survey*, 2002; Select Committee report: HC 481 (22 June 2002).

government and the judiciary. Other public sector bodies (including NDPBs, local authorities, water boards, provincial authorities) as well as citizens and businesses were to be given access on 'market conditions'.

The agreement gave the consortium a virtual monopoly, since the government agreed to not supply the raw materials (laws and decrees) in electronic form to anyone else. Nor would it cooperate with other private parties interested in developing a similar product. The consortium acquired all intellectual property rights in the database. Laws, decrees, court decisions and the like are not copyrightable subject matter in the Netherlands, but a collection can be copyrighted (under the copyright regime if it is original, under the '*geschriftenbescherming*' regime if it is not original, or under the database right regime, if it meets the substantial investment criterion). The fact that, of all possible public sector information, the government chose to commercialize the electronic publication of *laws*, caused public outcry.[17]

When in the mid 1990s, the government reviewed and expanded its policies on access to public sector information, it adopted a radically different approach. It paid the consortium to make the database accessible via a government website. When the 10-year agreement ended a new deal was struck, this time with the privatized State printing office. All consolidated legislation of central government as well as all official records of parliament are now accessible via Internet at no charge. Under the new policy, this type of information, as well as decisions of (administrative) courts is now considered as 'basic information of the democratic state', which is made freely available and usable (e.g. funded by tax money).

A similar situation, but with regard to hydrographic maps, has arisen in Canada. The Canadian Hydrographic Service had started in the early 1990s to convert paper charts of Canadian waters into electronic form. It entered into a partnership with the company NDI, because it felt it was not properly equipped and lacked the funds to handle the conversion by itself. NDI was given the exclusive right to produce and distribute those products in digital form, as well as to grant sublicenses to others to reproduce and distribute digital products containing data from the Canadian Hydrographic Service.[18] The pricing of the digital charts was based on a (commercial) model that considered the costs of production and dissemination as well as market forces.[19] Other companies refused to recognize NDIs exclusive rights and to pay them royalties. This led the Canadian Hydrographic Service to launch a media campaign advising users to stay clear of infringing products.[20] Ultimately, CHS decided to terminate the exclusive license agreement, which purportedly led

17. In the same period, there was controversy surrounding an opposite case: New York State's senate decision to pass a law that would prevent commercial re-distributors from accessing legal information in New York's public law database LRS, to prevent competition; R. Gellman, 'Twin Evils: Government Copyright and Copyright-like Controls over Government Information', 45 *Syracuse L. Rev*. 999-1072 (1995), p. 1013 ff.
18. <stjohns.cbc.ca/regional/servlet/View?filename=nl_chartfight20040409>.
19. *See*: <www.charts.gc.ca/pub/en/help/copyrightfaq.asp#Q2>.
20. 'Boaters lost in marine chart fight', *CBC Montreal Online news*, Web Posted 9 April 2004. <stjohns.cbc.ca>, <www.charts.gc.ca/pub/en/help/copyright.asp>.

to NDI filing for bankruptcy. The government organisation and its (former) business partner now find themselves opponents in both the bankruptcy case and the case that NDI brought against the termination of the agreement.[21]

Another infamous example of public-private partnerships that adversely affect access to information funded by the government is the Land sat debacle. The US remote sensing programme Land sat started in the 1970's and was run initially by NASA, then by the National Oceanic and Atmospheric Administration (NOAA), an organization part of the Department of Commerce. It had launched satellites dubbed Land sat 1 through 5 by the time the programme was 'commercialized' in 1984. Land sat 5 was turned over to a private sector consortium, which was contracted to also construct, launch and operate new remote sensing satellites and market the data. It received large amounts of public funds to do so. The consortium only launched a successor satellite in 1993, nine years later than originally envisaged. This Land sat 6 never made it to orbit.

In the mean time, the prices charged for data from Land sat soared, severely affecting the wide distribution of data that had characterized the programme before. Especially researchers could no longer afford the latest data. In 1992 the commercialization of the Land sat system was reversed. The new Land Remote Sensing Policy Act[22] introduced a system whereby the government can procure the design and delivery of satellites, but acquires or retains ownership of the Land sat system and the unenhanced data it generates. The Act also contains a data policy that is consistent with the general policy for access to government data as laid down in OMB Circular A-130 (see below).

Apparently the experiment with the remote sensing system was such a failure that Congress wanted to avoid a repeat with weather satellites. Section 5671 of the Land Remote Sensing Policy Act provides: 'Neither the President nor any other official of the Government shall make any effort to lease, sell, or transfer to the private sector, or commercialize, any portion of the weather satellite systems operated by the Department of Commerce or any successor agency.'

Public-private partnerships can of course also be a success, and lead to the creation and availability of data that would otherwise not be produced because no single organization has the appropriate resources. The cooperative effort to produce a digital large-scale map (GBKN) of the Netherlands is an example. The PPP was set up in 1992 and is composed of a central coordinating body (under private law) and regional bodies, which are responsible for creating and updating the data for their region. Partners in the central body are associations of local authorities, water boards, and utility companies (water, gas, electricity), as well as major telecommunications companies and the Land Registry. The regional bodies are PPP's in themselves, in which associations and individual companies or public sector bodies

21. *Statement of Canadian Hydrographic Service* <www.charts.gc.ca/pub/en/help/chsndi.asp> (page last updated 2005-5-26 13:53).
22. 15 USC 82, P.L. 102-555.

take part, depending on the presence or interest they have in data from the particular region.

There are three categories of parties in this GBKN public-private partnership: participants, regular users and incidental users. The participants not only receive data, but also bear part of the responsibility of supplying data and maintaining it. They commit themselves to take part in the PPP for at least 5 years. Users have access to the data on the basis of a 5-year contract. To determine the relative financial contributions of each party, classes of participants and users have been determined that each pay a certain percentage of the costs (e.g. local authorities are a class of heavy users, who contribute more than a water board). Incidental users can order data, or subscribe to a subset of data with regular updates.

Currently, participants and users typically are end-users who need the data for planning, construction and maintenance of physical infrastructure. The licence agreements do not allow for re-distribution of the data, something that may change in the near future as companies in the information market become interested in using the data to develop value-added products.

Conflicts that must be addressed in partnerships usually stem from the interest private sector has in exclusiveness versus the public sector's interest in wider access, data quality, and continuity of supply. If these conflicts cannot be resolved, the public sector is wise to keep production and dissemination in its own hands. That is what happened with the Dutch small-scale (1:10.000) topographic database, which the Topographic Service of the Ministry of Defence had been building since the 1990s. It is used throughout the public and private sector as a uniform base in specialized geo-information systems. The Ministry of Defence, although an important user of the digital map, no longer regarded its production as a core activity.

In consultation with other stakeholders from the public sector, the Ministry of Defence explored the possibility that the private sector could take over the completion and maintenance of the small-scale digital map. No serious candidate could be found, who could meet the required continuity and quality at acceptable terms of access/pricing. The choice was made to integrate the Topographic Service in the Land Registry (*Kadaster*). The production and distribution of the topographic database now takes place on a cost recovery basis, i.e. all public sector users will contribute proportionally. Private sector users are charged prices that include the cost of data collection in addition to the cost of reproduction and distribution, and a surcharge for publication or re-distribution of the map-data. The government reasons that if the collection and update of the database had been left to the private sector on a commercial basis, private sector users would also have had to pay fees based on (at least) integral cost.[23]

Since the small-scale digital map is expected to be used as a backbone for data-exchange throughout the public sector, it can be argued that if the map so important for the exercise of public tasks, its production and maintenance should be funded

23. *Kamerstukken II* 2002/03, 28748, no. 3, p. 6.

with public money. Private sector users would then pay the cost of reproduction and dissemination of the data they are supplied.

3. POLICY INSTRUMENTS AFFECTING ACCESS

3.1. INTELLECTUAL PROPERTY

The existence of an intellectual property regime (IPR) for public sector information is not necessarily indicative of commercialization policies: the fact that government information is copyrighted does not mean that it can only be accessed under restrictions and at cost or 'market' prices. The reverse is of course also true: the fact that public sector information is not subject to IPRs does not make it more easily accessible to the private sector (or across the public sector for that matter). It takes access policies to stimulate the re-use of government information and determine the conditions of use. As elaborated below, IPRs appear to be only a minor factor in pricing and access policies.

The US policy of excluding information produced by the federal government from copyright protection is often quoted as an important instrument for the development of value added services by the private sector. To facilitate access even further it has been proposed to also exempt the results of federally funded research from copyright in the HR 2613 Sabo Bill on Public Access to Science. However, if it is indeed true that – as has been said about the Netherlands – local governments in the US hold most of the information that is interesting for commercial exploitation, copyright policies at the state and local level could be more relevant than Federal policies. Local policies do not necessarily follow the Federal example.[24]

The UK is among the countries with a strong tradition of copyright for public sector information with its so-called Crown copyright. Works of all government departments and parts of departments, such as trading funds, have Crown status. Her Majesty's Stationery Office (HMSO) is the principal organization entrusted with the management and license of government information subject to Crown copyright. The departments of the central government need the authorization of the HMSO to license their 'own' data to third parties. Many major information producing bodies have received such permission, such as the meteorological office (Met Office), land registry, Ordnance Survey, Companies house and the National Archives.

Rather than as a hindrance to the widespread distribution of government information,[25] intellectual property rights of the public sector can be used as tools to further access. IPRs can be used in addition to contractual arrangements to ensure that access

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24. A review by S. Sandeen shows that very few states have laws that dedicate copyrighted works owned by the state to the public domain: 'Preserving the public trust in state-owned intellectual property: A recommendation for legislative action', 32 *McGeorge L. Rev.* 385-418 (2001), p. 386, 406 ff.; *see also* Gellman, *supra* note 17 at p. 1027.
25. *See* the examples Gellman gives of copyright as a tool used by government to hinder public debate, *supra* note 17 at p. 1008, 1033.

and pricing policies are upheld down stream in the information market liberal. For example, it has been suggested that HSMO could revoke this authorization if the agency in question does not comply with fair information practices (see infra).[26]

3.2. FREEDOM OF INFORMATION

During the legislative process that resulted in the Directive on re-use of public sector information, the European Commission was keen to keep access issues out of the discussions, whereas the European Parliament pushed for amendments that would make clear commercialization policy should not curb rights under the national freedom of information acts.[27] Among the various reasons why this is a real threat are the following:

1. Where the public sector pursues a policy of pro-active publication at full cost recovery charges, and the relevant freedom of information act (FOIA) contains provisions to the effect that no requests can be made for information that is already publicly available,[28] regardless of the price.[29]
2. The transfer of information production to bodies that are not subject to FOIA. The extent to which this is possible depends of course on the scope of a national freedom of information law. In the Dutch FOIA, for example, the definition of public sector bodies is very wide, comparable to the definition in the PSI directive. In the US, even private non-profit organisations in education and research are subject to freedom of information laws with regard to information stemming from research (co) funded by Federal government.[30]

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26. Suggested in *Consultation Document on Proposal for a Directive of the European Parliament and Council on the re-use and commercial exploitation of public sector documents*, Department of Trade and Industry/HMSO, 12 September 2003, p. 5.
27. Interestingly, the Dutch government has decided to implement the PSI Directive in the general FOIA (*Wet Openbaarheid van Bestuur)*, *Kamerstukken II* 2004-05, 30 188, no. 1-3; the French government has chosen a similar approach: *Ordonnance n° 2005-650 du 6 juin 2005 relative à la liberté d'accès aux documents administratifs et à la réutilisation des informations publiques* (*Journal Officiel* no. 131 du 7 juin 2005, p. 10022).
28. Under the UK FOIA 'publication' means not only posted on a website or published by a public body, but also published by a commercial publisher. *See* Department of Constitutional Affairs, *Freedom of Information Act 2000 – Publication Schemes, Central Government and Non-Departmental Public Body Guidance*, July 2002 at 11.2).
29. This seems to the case in Canada, *see* A. Roberts. 'Closing the Window: How Public Sector Restructuring Limits Access to Government Information', *Government Information in Canada/ Information gouvernementale au Canada* No. 17 (March 1999). <www.usask.ca/library/gic/17/roberts.html>. *See also* the *SDC* v. *Mathews* case analyzed by Gellman (*supra* n. 25 at p. 1036), where the (commercially interesting) electronic version of a government database that is also published in print was ruled subject to FOIA (only the print version was).
30. Shelby Amendment of 1999, enacted in: Office of Management and Budget, *OMB Circular A-110 – Uniform Administrative Requirements for Grants and Other Agreements with Institutions of*

3. Where the private sector is a partner in the collection or dissemination of public sector information, the former may have a commercial interest, own intellectual property or give the information in confidence,[31] all of which could trigger a FOIA exception.[32] As the expansion of IPRs continues, so do chances that it will limit access under freedom of information law.
4. There may be an incentive to discourage FOIA requests if FOIA charges are collected centrally (as is the case under US federal FOIA) and go towards the general budget, whereas fees for (commercial) re-use would go towards the public body where the information originates (as is the case with copyright fees collected by HMSO in the UK).

The above situations sketch potentially negative effects of commercialization policies on access under freedom of information law. But one could also look at the relation between freedom of information and stimulating commercial use from the perspective of the latter. The basic idea of FOI legislation is that government information is made available for any interested party, either pro-actively or on request, at no charge or at the cost of reproduction and dissemination maximum. Such broad access may well make such information uninteresting for commercial exploitation.

On the other hand, access under freedom of information law generally does not give the right to exploit the information if it is subject to intellectual property rights. In the Netherlands, France, Germany, the UK and other EU countries there exists copyright and database rights in most government information. The US policy of excluding federal government information from copyright is quite exceptional. Also, the idea of improving access to public sector information for commercial purposes is that the private sector develops value-added products and services, not that they redistribute unenhanced data.

Higher Education, Hospitals and Other Non-Profit Organizations (11/19/1993), Washington D.C., amended 09/30/1999, s. 36 available at: <www.whitehouse.gov/omb/circulars/a110/a110.html>. Initially broader in scope, it has been limited to research that federal government refers to in its laws and regulations (e.g. studies on health effects of environmental pollution that are used to justify environmental laws). For a discussion of its potentially adverse effects on the research community, *see The Scientist* 14[6]:13, Mar. 20, 2000, and E. Russo, 'Debating Shelby', *The Scientist* 15[7]:14, Apr. 2, 2001.

31. To prevent an overbroad scope of the exception for information provided in confidence, the UK guideline requires that public sector bodies should consider the FOI implications before agreeing to confidentiality provisions in contracts or accepting information in confidence from a third party. (Lord Chancellor's Code of Practice on the Discharge of the Functions of Public Authorities under Part 1 of the Freedom of Information Act).
32. The number of statutory provisions which bar access under a FOIA can be substantial: the UK's Department of Constitutional Affairs (DCA) recently identified 210 such provisions in English statutes, *see* DCA, *Review of Statutory Prohibitions on Disclosure* (June 2005).

3.3. INFORMATION REGISTERS & PUBLICATION SCHEMES

The PSI Directive rightly recognizes that stimulating access to information requires knowledge about which material is available on what terms. It therefore instructs Member States to ensure the availability of inventories or 'asset lists' of the public sectors main information resources, preferably on-line (art. 9). It does not specify a minimum set of meta-data that should be made available, nor does it give any indication of what 'main documents' are.

Progress has been made recently on metadata services, which are increasingly accessible on-line. In many EU-countries, central governments actively pursue the development and maintenance of portals, which give access to catalogues of public sector information using common metadata. A potential problem is that the information described in these catalogues is not the most interesting from the perspective of (commercial) re-use. One Dutch inventory shows that most electronic datasets are kept by local government (provinces, counties), and that geographic information is an important type of data they hold.[33] Geographic information is in turn considered to be particularly interesting for re-use.[34] To the extent that the policy on access to information for commercial use is directed principally at data held by central government, the policy's positive effects may thus be limited. Also, many registers and portals are inspired by the two main objectives of freedom of information law: to improve democratic accountability and stimulate participation in decision-making. Information offered for direct access will then be selected according to its relevance for achieving these objectives rather than its suitability for commercial re-use.

Another source of meta-data are information registers, i.e. catalogues of unpublished government information. These may be maintained on the basis of Freedom of Information Acts. At the EU-level, Regulation 1049/2001 on access to documents of Parliament, Council and Commission instructs the EU institutions to give public access to a register of documents (art. 11 Regulation). In the Netherlands, there is no legal duty for public sector bodies to keep registers of unpublished information for FOIA purposes. By contrast, the US Federal Freedom of Information Act does require departments and agencies to pro-actively supply information on its tasks, policies, procedures, etc. in so-called 'reading rooms', increasingly hosted on Internet.

At the national EU level, a very broad scheme is the UK's Information Asset Register (IAR), which contains standardized metadata on unpublished government information. It was initiated by the government after experience had showed that parties interested in re-using this type of information have substantial difficulty in locating government information. The Information Asset Register forms part of the 'UKOnline Action Plan' and is coordinated by HMSO. It also plays a role in the development of publication schemes.[35]

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33. BDO Consultants, *supra* note 7, p. VII.
34. PIRA, *supra* note 9, p. 10; Berenschot, *supra* note 9.
35. HSMO Guidance Notes no. 18 of 2002.

Under the new UK Freedom of Information Act (in force since January 2005), departments are required to adopt a 'publication scheme'. These are meant to help make a significant amount of information easily and routinely available. According to section 19 of the UK's Freedom of Information Act:

- Each public authority must develop and maintain a scheme that relates to the publication of information by the authority;
- Information must be published in accordance with the publication scheme;
- Schemes must be approved by the Information Commissioner and reviewed regularly;
- Publication schemes must specify the classes of information (to be) published, how the information will be published and what, if any, fees are charged.

According to the information commissioner, public bodies should include information on how their organisations work, including an outline of decision-making processes work and how key appointments are made.[36]

3.4. Fair Information Practice Policies

In the Netherlands and the US, the focus of policy has been on limiting the activities of public sector bodies to the supply of unenhanced or raw data produced in the exercise of public tasks. The aim is to leave the development of value-added products and services to the private sector. In the UK, there is no general information policy that limits the activities of the public sector in this way. Market activities are not frowned upon as long as rent seeking is only secondary to the fulfilment of public tasks.

3.5. United States OMB Circular A-130

The primary policy document relevant to commercialization of government information is OMB Circular A-130 (rev 4).[37] The Office of Management and Budget is responsible for the coordination of Federal information resources management. In Circular A-130, it establishes a policy for the information activities of all agencies of the executive branch of the Federal government. 'Agencies' include all executive departments, military departments, government (controlled) corporations and

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36. Information Commissioner, *Publication schemes. Guidance and methodology*, April 2003, point 6.7,
37. Office of Management and Budget, *OMB Circular A-130 (rev 4) Management of Federal Information Resources*, Washington D.C., November 28, 2000 available at: <www.whitehouse.gov/omb/circulars/a130/a130trans4.html> (visited on 17 January 2006).

other establishments in the executive branch.[38] 'Government information' means information created, collected, processed, disseminated, or disposed of by or for the Federal Government.[39] Circular A-130 contains a variety of provisions that aim to improve the management of public sector information and its accessibility, both for purposes of democratic accountability as well as commercial re-use. Its central objective though, is to assist federal agencies in organizing their information activities efficiently. From the perspective of commercialization, the important provisions contained in section 8 are the following:

- Agencies must collect or create only the information that is necessary for the proper performance of their functions and that has practical utility;
- User charges must not be higher than the cost of dissemination. Costs associated with original collection and processing of the information are not to be charged, unless the agency is under a statutory requirement to do so, or where its information activities benefit a special identifiable group;
- Distribution arrangements should ensure the timely and equitable dissemination of information (no exclusive or restricted arrangements);
- There should be no restriction on the re-use, resale or re-dissemination of information (added fees, royalties, etc.).

Data policies in specific laws, such as the Land Remote Sensing Policy Act of 1992, contain more detailed provisions which are aimed both at securing the availability of data for the public sector and for purposes of scientific research, and at supporting the development of the commercial market for remote sensing data. The provision of commercial value-added services based on 'raw' remote sensing data must be left to the private sector. To achieve this, all unenhanced data from government funded and owned land remote sensing systems must be made available to all users. All (classes of) users must be treated equally, which means that the conditions regarding delivery, format, pricing, etc. must be the same for customers requesting the same datasets. An exception is made for the federal government and its affiliated users (e.g. researchers working on Federal and international global exchange programmes). These users may be charged reduced prices, if the data are used solely for non-commercial purposes.

An example where federal government secures access for its own uses is in federally funded research. Under OMB Circular 110,[40] the federal agency that funds research resulting in copyrighted work(s), reserves an irrevocable right to reproduce, publish, or otherwise use the copyrighted work for Federal purposes, and to authorize others to do so. The right is non-exclusive and royalty-free.[41] Research data produced with federal funding may also be used (accessed, published, etc.) by the funding agency. It can also authorize others to access and use the data for

38. Id., section 6c).
39. Id., section 6h).
40. *See supra* note 30.
41. OMB Circular A-110, s. 36a).

Federal purposes.[42] The commercial exploitation of research is left to the research community. [43]

3.6. THE NETHERLANDS INSTRUCTIONS ON MARKET ACTIVITY BY PUBLIC SECTOR BODIES

The Dutch Competition Act – which is modelled after European competition laws – does not address the issue of public sector activity in the market, other than through the prohibition to abuse a dominant position and the special provision for services in the general interest, similar to Art. 90 EC Treaty.

After a series of reports and debates on unfair competition by public sector in the second half of the 1990s, the Dutch Parliament and the influential Social and Economic Council (SER) urged the cabinet to prepare an act regulating when and under what terms public sector bodies can perform market activities. The objective of such a law was twofold: on the one hand, it would prevent unfair competition by the public sector, caused by the advantages stemming from assets or expertise resulting from public tasks. On the other hand, it would ensure that the execution of public tasks would not suffer from commercial activities.[44] Particularly the 'market access' part of the law would have to guarantee that the public sector only engages in market activities if that is the appropriate way to serve the public interest. The proposed act contained special more lenient provisions for public and private funded research institutions insofar as they engage in market activities concerned with the development or dissemination of new knowledge.

Companies that perform statutory tasks exclusively were to be excluded from the act.[45] Public private partnerships in the shape of design, build, maintenance were not covered by the act, but joint ventures in which public and private bodies participate were.

The draft act attracted fierce criticism in parliament, particularly as regards the 'access' rules. Especially the proposed requirement that the specific market activity must be supported by a formal (statutory) decision was seen to needlessly encroach upon the autonomy of executive agencies and NDPBs. To work efficiently, the agencies generally operate fairly autonomously in serving the public interest.

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42. Id., s. 36c) 1-2.
43. Researchers can obtain copyright (despite the federal funding), *see*: *OMB Circular 110-A*, s. 36. Industrial property in federally funded research can be maintained and exploited by the researchers on the basis of the 1980 Bayh-Dole Act, PL 96-517.
44. *Kamerstukken II* 2003-2004, 28 050, no. 7, p. 2. The influential *Wetenschappelijke Raad voor het Regeringsbeleid* (WRR, Scientific Council for Government Policy) had voiced concern over the changing, more commercially oriented, culture in the public sector and its impact on the values that are essential to public service in its report *Het borgen van publiek belang* (Securing the public interest), (SDU, The Hague 2000).
45. Ministry of Economic Affairs, *Overheidsbedrijven in Nederland, Onderzoek naar aantal en omzet* (Public companies in the Netherlands, Research on number and turnover), December 2002.

Another point of criticism concerned the administrative burden that the access rules would impose.

After a change of government, the proposed act was reviewed; subsequently, in early 2004 the proposal was officially revoked. The approach now is to focus on preventing unfair competition by including new rules on conduct in the Competition Act for both public undertakings and private sector entities with exclusive or special rights, and by revising the existing Instruction on market activities.

For central government, the 1998 *Instruction on market activities by organisations within the central administration* still contains the principal rules.[46] Bodies or agencies belonging to the (legal person) State may only involve in market activities:

1. If these are an (in)direct statutory task, or;
2. If they follow from international obligations;
3. If they are intimately connected to the exercise of a statutory public task and the responsible Minister has issued an order allowing the activity to take place.[47]

Market activity comprises the supply of goods or services to parties outside the State (i.e. departments and agencies belonging to the legal entity State) in competition with others. If market-activity is undertaken in situation 3, the integral cost of the products or services must be used as a basis for price-setting. The pricing scheme must also correct fiscal advantages of the public body engaging in market activity. These rules do not apply to major information producing bodies such as the Land Registry/ Ordnance Survey and the Chambers of Commerce (who operate the companies registers). These are NDPBs with separate legal entity to which the Instruction does not apply, but the specific laws and orders that regulate their activity have been adapted so as to avoid unfair competition (separate accounts, no cross-subsidies, etc.).

The Instruction also states that data that are collected in the exercise of public duties and to which access is not restricted on the basis of duties of confidentiality or data protection law, must be made available to third parties (i.e. the private sector) under equal conditions. If the data are confidential or subject to privacy laws, the public body may not use them in market activities, as to prevent unfair competition.[48] Ministers are responsible for compliance with the instruction.

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46. *Vaststelling aanwijzingen inzake verrichten marktactiviteiten door organisaties binnen de rijksdienst* (Decree on Instruction on market activities by organisations within the central government), *Staatscourant*, 1998, 98.
47. There is also a regulation on the use for commercial activities of surplus capacity of capital goods necessary for the exercise of a public task (e.g. an army airbases), but it is not relevant to our subject.
48. This provision seems superfluous, because if data are confidential or may not be freely distributed because of data protection law, it is unlikely that the public body in question could commercially exploit the data.

In an instructive case concerning the dissemination of traffic information collected by the public sector, the District Court of The Hague ruled that the Traffic Information Centre should not make available basic data to the general public itself via its website. Under the Instruction on Market Activities such activity is allowed. The executive agency of the Ministry of Transport and Water in question has the policy of supplying basic traffic information free of charge to private sector companies, so that companies may provide value-added services (website with information for motorists, sms alerts of traffic jams, etc.). The licenses are non-exclusive and contain certain conditions to ensure the integrity of the information and indication of its source.[49] An interesting detail is that the company which obtained the injunction against the Traffic Information Centre is operated by former employees who decided to 'go commercial'. Since the conflict, a special advisory committee installed by the government has concluded that the Ministry of Transport (through the Traffic Information Centre) should be allowed to supply services to the general public insofar as the private sector does not sufficiently supply them. The Traffic Information Centre should also supply (at 'limited' costs) a direct stream of road sensor data to interested parties in the private sector for further exploitation.[50]

3.7. UNITED KINGDOM'S INFORMATION FAIR TRADER SCHEME

UK policy for central government differs quite substantially from US Federal policy. As early as 1966, the US federal government issued OMB Circular A-76 on commercial activities.[51] It lays down the rule that government should not compete with the private sector. The government should not perform a market activity if that can be done more efficiently by the private sector. A commercial activity is any service or product that could be obtained from the private sector.

In the UK, public bodies are allowed to enter into competition with private sector suppliers, as long as they adhere to competition rules. To avoid price dumping, which could be the result of charging only costs of dissemination, UK public sector suppliers can charge market prices (based on what customers will pay rather than on cost recovery). Exclusive distribution arrangements are not necessarily to be avoided under UK policy. Restrictions on the re-use of data are allowed since they are an integral part of cost recovery schemes based on price and product differentiation (where data bought for commercial use are considered a different product from data acquired for non-commercial use such as scientific research).

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49. Vzr. Rb. Den Haag 4 August 2003, rolnr. KG 03/625, LJN no. AI0852 (*VerkeersInformatieDienst* v. *Staat*).
50. *Verbeteren van de inwinning, bewerking en verspreiding van verkeersinformatie, Advies van de Adviescommissie Gedragsregels Verkeersinformatie* (Improvement of collection, processing and distribution of traffic information), annex to *Kamerstukken II* 2003-04, 29 200 XII.
51. *OMB Circular A-76 Performance of commercial activities (revised 1999)*. A-76 is accompanied by an extensive handbook which details when activities are allowed in-house or must be contracted out, cost calculation rules, etc.

As the body responsible for the management of Crown copyright, HMSO developed a policy to improve dissemination and pricing of government information. The Information Fair Trader Scheme (IFTS) should ensure that re-users of public sector information will be treated 'reasonably and fairly' by public sector information providers. All Crown bodies that have a licensing delegation from HMSO must join the Scheme (all are currently trading funds), but it is open to most public sector organisations to join voluntarily. The IFTS scheme will apply to any information that is released proactively or on request under the Freedom of Information Act 2000 (or its predecessor the Code of Practice on Access to Government Information). The chief principles of the scheme are as follows:

- In principle, all information managed by HMSO will be licensed for any use, by any user;
- Details on licensing and pricing policy should be made public and explained clearly;
- Decisions on licensing requests should be motivated and be consistent with Information Fair Trader principles;
- All (prospective) licensees should be treated equal (for the same type of licence);
- Licensing and pricing policy must not be in breach of competition law;
- Organisations should not abuse their market power;
- Organisations agree to independent reviews, to see if they can and do comply with the fair trader scheme;
- Organisations agree to an investigation by HMSO of apparently incorrect licensing decisions;
- There must be a procedure for complaints on incorrect licensing decisions.

We have seen that the general policies in the US, UK and the Netherlands lay down the principle that access for purposes of re-use should be given on a non-discriminatory basis. This implies that exclusive partnerships between public and private sector bodies are to be avoided. The PSI Directive prohibits exclusive agreements, unless 'an exclusive right is necessary for the provision of a service in the public interest' (art. 11). Exclusive agreements must be reviewed regularly (at least every three years).

The question is of course how strict or broad this necessity-criterion will be interpreted by the courts. It may well prove to be cosmetic, considering that the thrust of the PSI Directive is to get more government information on the market rather than change existing publication practices.

3.8. PRICING STRATEGIES

It is a popular belief that government information – once produced for public sector purposes – should be made available at marginal cost to the private sector.

Marginal costs in this context are usually equated to the cost of reproduction and dissemination of the information product. This low-cost access supposedly serves as an incentive for economic activity that will generate more tax income than the supply of public sector information at prices above marginal cost could. As we have seen, the principle of marginal cost access is laid down in Circular A-130 of the US Office of Management and Budget. Fees may also be waived altogether, or set below marginal costs, for instance to secure access for non-profit scientific research. Circular A-130 does not exclude full cost recovery, but the agency practising it must be acting under a statutory requirement.

There is no consensus on the welfare effects of marginal cost access to government information. Economists at the UK's Treasury department are not convinced that such a pricing policy would necessarily increase social benefit. If the trading funds, such as the Ordnance Survey, are not allowed to recover their (large) fixed costs, the expenditure would have to be funded through taxes. Therefore, 'efficiency gains from improved resource allocation in the information market are likely to be broadly offset by fiscal burdens elsewhere in the economy.'[52] Another argument put forward against the marginal cost model is that it may lead to under-funding of public sector bodies.

The UK government recognizes that under a cost-recovery model for all public sector information, there is little incentive for the re-use of information by the private sector. Its new policy – following a review of Crown copyright and access to government information in 2000 – is that Crown copyright information is to be made available at marginal cost.[53] There are a number of important exceptions to this principle. First, all public sector bodies continue to be free to develop value-added services charged at market prices, i.e. only the information which is central to core responsibilities of the public sector is to be made available at the cost of reproduction and dissemination. Second, the trading funds (Ordnance Survey, Meteorological Office, etc.) keep their cost recovery models[54], because these provide services that go beyond the government's own needs. The third exception is in the interests of fair competition: where the information service is provided in competition with the private sector, the price charged should approximate the market price (which may well include a profit element).

An increasing amount of 'core' information is also made available on-line, free of charge, but democratic accountability and not reuse is here the driving force. Laws, policy documents, parliamentary papers, etc. are accessible via a central website. In the Netherlands, what is dubbed 'basic information of democratic society', is now also increasingly available on-line and for free. Under the Dutch freedom of information

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52. *Cross cutting review of the knowledge economy, supra* note 52.
53. *Cross cutting review of the knowledge economy*, *supra* note 52, Chapter 5, point 5.17 ff. Crown copyright licensing yields an estimated 340 m GBP annually; over 90% of that income is generated by five organizations, of which four are trading funds. They each derive between 20-50% of their income from the public sector.
54. Across broad categories of information products fees should cover the integral cost of the information; cross subsidies are not allowed.

law, the maximum charges are the costs of reproduction and dissemination. Although this policy is quite similar to the UK's new Crown copyright policy, there are no general binding rules for government information. As in the UK, there are NDPB that, by law, must operate under a cost recovery scheme. Under the Instruction on market activities mentioned earlier, market prices may have to be set in order to prevent unfair competition with private sector suppliers.

4. CONCLUSION

The public sector has such wide ranging activities and tasks that is does not seem to be appropriate to have one set of rules for access to all government information. Commercialization policies need not have an adverse effect on the public domain, particularly where their aim is to open up information resources that until then were used internally (e.g. administrative and auxiliary data).

It also makes sense to distinguish the different objectives for access. On the one hand, if stimulating economic growth is the objective, this can be achieved by allowing the private sector to use public sector information as a resource. This objective implies that considerations of economic efficiency should guide access and pricing policies for commercial reuse. The prevention of unfair competition is an important strategy in this respect (e.g. no cross-subsidizing on the part of the public sector, in principle non-exclusive access for the private sector at equal terms). In Europe, the implementation of the PSI Directive is a significant first step, even if it leaves a wide measure of discretion to the Member States.

Possibly, the grant of easy access at marginal cost can result in more tax income from extra economic activity than can be generated with cost recovery based charges. It could also be that the economic effects are different for different types of data and uses (e.g. register data vs. research data, internal use v. commercial publication). Such conclusions can best be left to economists.

The second objective of giving access to public sector information is to enhance democratic accountability and participation in decision-making. Obviously, this interest is best served by broad and low cost (or free) access to information that is pertinent to the 'what, why and how' of public responsibilities. The danger exists, however, that the economic and the democratic dimensions collide, and that economic interests win out if no measures are taken to re-enforce the freedom of information law. Such measures could include:

- To prevent public sector bodies from withdrawing information from the scope of the FOIA (i.e. through outsourcing information production, privatization, etc.). A broad definition of 'public sector body' – such as the definition contained in the Directive on re-use of public sector information – is the most obvious means to achieve this;
- To stimulate alertness on the effect of third party information supplied in confidence, which could trigger a limitation to access; require a 'FOIA

effects' test, aimed at weeding out inappropriate claims of confidentiality (cf. UK);
- To explicitly allow non-commercial use of information accessed under the FOIA in which third parties own copyright or other intellectual property. This could be a thorny issue, given the internationally accepted three-step-test for limitations on copyright and other intellectual property rights;[55]
- To explicitly rule out the possibility that commercial exploitation of public sector information qualifies as a financial interest invoking a FOIA limitation.

As regards intellectual property, it is not realistic to propose the exclusion of public sector information from protection. It may even be counterproductive. As the proposal has been made with respect to HMSO, the public sector rights owner could use copyright or other IPRs to support broad access. As put forward by the open source and open archives movement, intellectual property rights may be used to counter overbroad claims in products or services based on government information.

For both access for purposes of commercial re-use and under the FOIA, the availability of metadata and of clear and well-publicized access and pricing policies is of paramount importance. Initiatives such as the UK's Information Asset Register for unpublished government information resources, and the Publication Schemes (compulsory under UK FOIA, comparable to the US's digital reading rooms) deserve following. Finally, a culture of openness in the public sector is essential. A lack of openness has long been recognized as a problem, which leads to public sector bodies withholding information – be it for political or financial reasons. This culture of openness should find expression in various areas: the (non)use of government intellectual property as a tool to stimulate access, licensing agreements, and the handling of FOIA requests (interpretation of exemptions, timeliness of supply,[56] etc.).

55. Ibid.
56. A promising solution in this respect is the proposed Open Government Act of 2005 (Cornyn/Leahy Bill S.394), which in S. 6 provides that if a FOIA request is not met within the statutory time-limits, the agency in question must grant the request (i.e.. can not invoke any exemptions) unless personal or proprietary information is involved, or national security endangered.

Chapter XIII

Free and Open Source Software: An Answer to Commodification?

Maurice Schellekens

1. INTRODUCTION

Linux is a PC operating system distributed under the General Public License (hereinafter: GPL). The GPL allows for the (royalty-)free use, modification and redistribution of the software. Given these license conditions, Linux users believed they could use the operating system without too many license worries. That was until SCO claimed to own the rights in certain parts of the Linux code, and started sending bills to Linux user for their use of the code 'owned' by SCO. IBM was targeted as well because it allegedly 'leaked' code segments to open source communities.

This case perfectly illustrates the effects of an ever-increasing trend towards commodification. In the early days of computers, software was given away for free to those who bought the hardware, but those days are over. Users of software must pay for its use as for any tradable commodity. Only the free and open source movements adhere to the old idea of sharing software instead of locking it in. But these movements are increasingly confronted by opposition from the proponents of what I will call the proprietary software model. *SCO v. IBM* is a case in point. If free and open source software is an exponent of the public domain for software, then this part of the public domain is 'under pressure'. Given the importance of a wealthy public domain for economic and social innovation, this development is cause for concern.

In this chapter I will focus on the following question: Does the open source model for development and distribution of software (and increasingly also of other types of information) provide an adequate counterweight to commodification? In the open source model, software is developed in a free and open way. Software is made available freely (i.e. without requiring payment of royalties) for anyone to use or modify, inclusive of its source code. In answering this question I will investigate whether open source lends itself conceptually to such a task. I will also try to shed

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 303–323

some light on the viability of the open source model, as it needs to compete with the traditional proprietary model and is under pressure from that model's proponents.

The outline of this chapter is as follows. Since free software and open source software are still relatively new phenomena, the following section will explain what free and open source software are. The so-called Open Source Definition will take center stage in this discussion. I will then focus on the central question of this chapter: Is the open source model an answer to the real (or perceived) drawbacks of commodification? In order to answer this question the interrelationship between a number of key concepts, such as commodification, public domain and open source software, is explained. This section provides an answer to the question of whether the open source model lends itself conceptually to form a counterweight against commodification or the proprietary model, which is the exponent of commodification. Having answered this question in the affirmative, I will then address a few doctrinal issues with respect to the free or open source license, more specifically the General Public License. These issues may become important since there is rather fierce 'competition' between the proprietary and open source models. The doctrinal weaknesses of the open source model run a certain risk of being exploited by the protagonists of the proprietary model. The converse question will then be addressed: How does open source model affect the proprietary model? Following that, the relation between technical protection of works and open source software will be dealt with, followed by the suitability of the model to function in conjunction with other types of information than software. The role of government with respect to the open source model is then investigated. The last section contains a conclusion reflecting the preceding sections.

2. WHAT IS OPEN SOURCE?

The term 'open source' refers primarily to the fact that the source code of computer software is made available to the public. But this is only part of the concept, as will be clarified below. The Open Source Definition (hereinafter: OSD) by the Open Source Initiative (hereinafter: OSI) is generally taken to be most authoritative definition of what open source is.[1] It must be said, however, that this is the definition of the OSI and diverts from what e.g. the Free Software Foundation (hereinafter: FSF) takes to be free software. According to the FSF, 'free software is a matter of the users' freedom to run, copy, distribute, study, change and improve the software.'[2] Free software is for most practical purposes entirely comparable to open source software. The main difference is in the ideological background. Stallman, the man behind free software, holds the opinion that all software should be freely available: think of 'free' as in 'free speech', not as in 'free beer'.[3] Stallman's main focus is on freedom.

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1. M.H. Webbink, 'Open Source Licensing: Today's Big Legal Challenge (Part 1)', *Georgetown CLE* 1-22 (2003). The Open Source Definition will be discussed below.
2. *See* <www.gnu.org/philosophy/free-sw.html>.
3. *See* <www.gnu.org/philosophy/free-sw.html>.

Raymond, the man behind open source software, takes a more practical stance.[4] Open source is simply a good way to develop and distribute software, no more, no less. In this chapter I will assume that software is open source if there is a material conformance to the OSD. This is in keeping with practice; the term open source is often used with a broader meaning, so that it also encompasses free software and software distributed under the BSD license.[5] So there is some room for a finding that licenses qualify as open source even if they divert in some respect from the OSD. From the OSD it appears that the terms for distribution determine what open source software is and what it is not. The definition consists of ten criteria that will be dealt with below. The terms of the definition are rendered in italics.

> *1. Free Redistribution*
>
> *The license shall not restrict any party from selling or giving away the software as a component of an aggregate software distribution containing programs from several different sources. The license shall not require a royalty or other fee for such sale.*

The licensee is free to redistribute the software. It can be assumed that copying necessary for redistribution is also allowed. Distribution is not limited to distribution of physical copies, but also includes distribution by other means such as transmission via the Internet.

> *2. Source Code*
>
> *The program must include source code, and must allow distribution in source code as well as compiled form. Where some form of a product is not distributed with source code, there must be a well-publicized means of obtaining the source code for no more than a reasonable reproduction cost preferably, downloading via the Internet without charge. The source code must be the preferred form in which a programmer would modify the program. Deliberately obfuscated source code is not allowed. Intermediate forms such as the output of a pre-processor or translator are not allowed.*

Computer programs are written in higher programming languages, such as Pascal, C++, etc. These higher programming languages do not include precise machine-readable instructions and thus make programming easier. Computer programmers can concentrate on the essentials, not bothered by machine-specific details. Programs written in higher programming languages do however have a significant drawback: they cannot be directly executed (i.e. run) by a computer. Such programs must be

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4. E.S. Raymond, *Homesteading the Noosphere*, First Monday 1998, available at: <www.firstmonday.dk/issues/issue3_10/raymond/>.
5. BSD stands for Berkeley Software Distribution, a derivative of the UNIX operating system.

first converted ('translated') into machine-executable form by special programs called compilers. The program in the higher programming language is called source code and the resulting machine code is called the object code. The machine code can be run on a computer independently of the source code from which it stems. In other words the source code is not needed to run the object code. A purchaser of proprietary software usually acquires only the object code, which is all he needs if he is satisfied with simply running the program. But if a program needs to be modified, the object code is basically useless. The desired modifications can only be made to the original source code and the now-modified source code will then be compiled into a new object code. The copies of the 'old' object code have become superfluous for those wishing to run the modified program; in general they cannot be updated and can thus be discarded. Theoretically, object code can be returned to a sort of higher programming language form, but this form is not the original source code and the process (reverse engineering) is so complicated and expensive that it often does not make economic sense. So for all practical purposes, the source code is needed to modify an existing program. This explains why the source code of proprietary software is mostly not released. Users wishing additional functionality to that which the existing program offers have no choice but to turn to the developers of the program who hold the source code. Furthermore, and more importantly, competitors of the software producers cannot build upon the software to create new compatible programs with additional features, fewer bugs etc. So software offers a sort of natural protection to those who write it and keep the source code to themselves. The requirement quoted above ensures that the source code of open source software must be made available.

3. Derived Works

The license must allow modifications and derived works, and must allow them to be distributed under the same terms as the license of the original software.

The rationale of making the source code available is to enable the licensee to modify the software and create derivative works. The right to do so must obviously be granted. Furthermore, the licensee has the right to redistribute the software in its modified form. Redistribution is not obligatory, but, if it is done, the same license must apply. Licenses that require the modified software to be distributed under the same license such as the GPL are often called 'copyleft'. Failure to distribute under the same license then constitutes copyright infringement and can lead to an injunction forbidding further distribution.

4. Integrity of the Author's Source Code

The license may restrict source code from being distributed in modified form only if the license allows the distribution of 'patch files' with the source code for the purpose of modifying the program at build time. The license must

> *explicitly permit distribution of software built from modified source code. The license may require derived works to carry a different name or version number from the original software.*

Sometimes it is not desirable to have modifications invisibly woven into the original program. In such a case the licensor can require that modifications be separately distributed as a 'patch'. The modifications to the original program are then clear from the source code of the patch. In order to prevent confusion between the different versions of a program that has been modified and redistributed time after time, the licensor may require that modified programs and derived works be distributed under another name or version number.

> *5. No Discrimination Against Persons or Groups*
>
> *The license must not discriminate against any person or group of persons.*

This provision ensures that the software is actually made available to the general public, and that certain groups of persons are not excluded.

> *6. No Discrimination Against Fields of Endeavor*
>
> *The license must not restrict anyone from making use of the program in a specific field of endeavor. For example, it may not restrict the program from being used in a business, or from being used for genetic research.*

This provision confirms that the open source model does not rule out commercial use.

> *7. Distribution of License*
>
> *The rights attached to the program must apply to all to whom the program is redistributed without the need for execution of an additional license by those parties.*

This provision is included to prevent additional obligations from being imposed through an additional license. A non-disclosure clause would be an example of such an extra obligation. As we have seen, the OSD leaves licensees free to redistribute the program, or not. A non-disclosure clause would obviously restrict this freedom. The provision clarifies that the license does not only apply to the direct successor of the licensor, but to all successors.

> *8. License Must Not Be Specific to a Product*
>
> *The rights attached to the program must not depend on the program's being part of a particular software distribution. If the program is extracted from*

> *that distribution and used or distributed within the terms of the program's license, all parties to whom the program is redistributed should have the same rights as those that are granted in conjunction with the original software distribution.*

This provision is self-evident.

> *9. License Must Not Restrict Other Software*
>
> *The license must not place restrictions on other software that is distributed along with the licensed software. For example, the license must not insist that all other programs distributed on the same medium must be open-source software.*

This provision prevents the viral effect of an open source license. The FSF's GPL does not conform to this requirement.

> *10. License Must Be Technology-Neutral*
>
> *No provision of the license may be predicated on any individual technology or style of interface.*

Software may be distributed in many ways. It may be distributed over the Internet (with or without mirroring), through FTP downloads or it may be distributed on a physical carrier such as a CD, perhaps as part of a software anthology. The way in which an open source license is formulated must not favor or prejudice certain technologies. This may be especially relevant when it comes to acceptance of the open source license. Acceptance through click-wrap presupposes that distribution takes place through Internet channels and that there is a graphical user interface that allows popup dialogues for the implementation of click-wrap. Some forms of distribution such as FTP downloads do not feature a graphical user interface; so alternative ways of accepting the open source license must also be provided, in order to meet the technology-neutrality requirement.

One issue needs some further clarification, i.e. the question of how to make sure that the free or open source conditions remain applicable to the software when it is distributed and redistributed over and again. The main mechanism for doing so is obliging each licensee to notify the open source conditions or even the exact license to his successor(s). The various licenses do however differ in what conditions have to be notified to successors. The BSD license is perhaps the most liberal in this respect. Only the obligation to retain the copyright notice, the disclaimer and the clause perpetuating these obligations must be included in redistributed versions. Vital open source features such as the right to redistribute and the obligation to include the source code in redistributions need not be carried over. So no 'guarantee' exists that BSD software remains available under open source conditions, apart from

the original version distributed by Berkeley. Most open source licenses however require that core open source characteristics be perpetuated. Such licenses then are 'copyleft'.

The GPL license is perhaps the license that takes this perpetuity furthest of all. The pertinent section (Article 2b GPL) reads: 'You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.' Not only must the entire license be carried over, the license must apply to an entire work even if only a small part of that work constitutes or is derived from a program that has been acquired under the GPL. This effect of the GPL of spreading its application to software in which GPL licensed software is contained is called the viral effect of the GPL. The viral effect follows from Stallmann's ideological starting point that all software should be free. Although one may hold the view that the viral characteristic really brings more software under this free regime, it may also be that this is not the case. The viral effect can deter software developers from combining proprietary software with GPL licensed software. Rights holders of proprietary software understandably fear losing control over the software if it is included in a free software package. For free software for which the reticence of software builders is considered to be undesirable, the FSF has developed the Lesser GPL license. The Lesser GPL license allows for the combining of Lesser GPL libraries with other software under certain conditions, without the other software being 'infected' with the Lesser GPL.

3. IS OPEN SOURCE AN ANSWER TO COMMODIFICATION?

3.1. OPEN SOURCE, PUBLIC DOMAIN AND COMMODIFICATION

In the early days software was given away for free to buyers of the hardware. It was seen as a necessity to sell hardware. Without software the hardware would not have been of any use to the buyer. Software belonged to the public domain. Soon it was discovered that there is a separate market for software. At that point the commodification of software began. The commodification of software in its turn often led to software enclosure. The source code was retained by the developer of software, so that the buyer or user of the software was compelled to turn to the developer for any modifications to the software. Restrictive licensing practices were introduced that could partly be enforced by technological means. A hardware dongle, for instance, made sure that software was only being used on certain computers. Time bombs forced users of software to pay the renewal fees for their licenses.

So where do we position open source? The free and open source movements are a reaction against software enclosure, but free and open source software are not in the public domain; their 'openness' is based on intellectual property licenses. Although copyright and the possibility to withhold source code from the users of information create an excellent position to exercise exclusion, this does not happen.

Open source software is 'free' and the position of power, which is mainly derived from copyright, is used to keep it free.

The free and open source models do not rule out exclusive rights altogether; there may exist a form of 'property' in the 'ownership' of a software development project. The owner of a project is a coordinator and as such exerts a large influence on the direction the software development will go and in deciding what will be included in 'official' releases. Someone can become the owner of a project by initiating a project, by taking over a project that has been abandoned by its previous owner or by consensual take-over. It has been pointed out that these ways of acquiring a project show remarkable similarities to the theory of Lockean property under which three similar forms of acquisition (of land) are discerned: homesteading, transfer of title, and adverse possession.[6] The similarity with Lockean property further cements the argument that it concerns 'real' property.

'Property' in the form of project ownership does not impinge on the ability of open source software to fend off commodification. Admittedly, the owner is to a great extent able to influence what functionality the eventual software will have. But the coordinating task of the owner is a necessary condition for completing a complicated project like software development. Without coordination, no large software project could be completed. Furthermore, the coordination activities by the owner do not have a negative bearing on the free distribution of the final software, inclusive of its source code.

On the conceptual level, the free and open source models certainly provide an alternative to the proprietary model that is devoid of the adverse effects of commodification. The free and open source models have the potential to provide a counterweight against commodification. But is the concept robust enough to realize this potential? Will free and open source licenses stand up when challenged in court? Open source licenses are only beginning to be tested in court. In Germany, Welte sought and got an injunction against Sitecom on the basis of the latter's non-compliance with the GPL. Sitecom had made open source software available to the public without a GPL license.[7] The legal discussion focused on the question of whether the loss of rights under Article 4 GPL (in case of non-compliance with the GPL) is admissible under German law. A loss of rights may impinge on merchantability of copies of open source software and affect the rights of downstream users. The court found the provision to be admissible. That downstream users who comply with the GPL have their rights reinstated was an important element in its finding.[8] The GPL thus withstood judicial scrutiny in Germany. However, one German swallow does not make a global summer. So it is still unclear as to whether the open source license will stand up if challenged in other countries, or perhaps on other grounds. In the next section, I will delve deeper into contractual issues concerning the free and open source license.

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6. *See* Raymond, *supra* note 4.
7. *See*: *Netfilter v. Sitecom*, District Court of Munich I, 19 May 2004, in 10 *Computerrecht* 774-776 (2004), with annotation by T. Hoeren and A. Metzger.
8. *See* Art. 4, last sentence, of the GPL.

3.2. THE PERSISTENCE OF THE GPL

Although there are many open source licenses, I will concentrate the following analysis of bottlenecks in free and open source licenses on the GPL. I have chosen the GPL because of its wide use, the fact that most analysis of the open source licenses has focused on the GPL and the only case to date involving open source licenses involves the GPL. Three main issues will be dealt with here:

- Is the GPL binding?
- Is it capable of keeping software in the domain of free and open source?
- Liability issues.

Is the GPL binding?

Is the GPL binding on a downstream user? The GPL addresses this issue in the first sentences of Article 5 GPL, which reads: 'You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License.' From these sentences it appears that the problem of the GPL not being binding may in practice not give rise to as large a problem as theoretically might be expected. One could reason – as the GPL does – that a (putative) licensee may very well have no interest in stating that he was insufficiently notified, because without the ensuing license he never had the right to use, modify and redistribute in the first place. It makes him vulnerable to a claim of copyright infringement. Nonetheless, the question of whether the GPL is binding can be relevant if the user of the software claims to have a fair use defense, in which case he would not need the license, or if the interest at stake is so great that the user is willing take the copyright infringement in his stride. It may also be that a user contends that some referenced terms are so unusual and detrimental to him that they are not enforceable.

The question of whether the GPL is binding can be likened to the question of whether shrink-wrap licenses are binding. The latter is a license printed on the inside of a shrink-wrap sheet encapsulating a support (such as a disc) that contains a computer program. There is case law finding that a party receiving software in shrink-wrap is bound to the license if in advance sufficient notice was given of the presence of license terms inside the shrink-wrap and the receiver does not take some specific action immediately after opening the shrink-wrap.[9] The receiver may for instance escape being bound by returning the program to the vendor immediately after opening the shrink-wrap. Of course, the evident criticism to this finding is that

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9. *ProCD v. Zeidenberg*, 86 F.3d 1447, 1451-53 (7th Cir. 1996) (Easterbrook J.). Under Dutch law, shrink-wrap agreements are only valid if two conditions have been met: 1. the buyer must beforehand be aware of the fact that he is about to accept an agreement in shrink-wrap fashion, and 2. the conditions of the agreement must be clear beforehand. *See* Rb. Amsterdam 24 May 1995 *Computerrecht* 1997/2, pp. 63-65 (*Coss Holland B.V./TM Data Nederland B.V.*).

a software user opens the shrink-wrap because he wants to use the software inside, not necessarily because he wants to accept the conditions printed on the inside.

McGowan calls this contract formation through notice-plus-conduct.[10] This can very well be applied to GPL licensed software. The GPL is applicable to any program or other work which contains a notice placed by the copyright holder saying that it may be distributed under the terms of the GPL (see Article 0 GPL). The terms of the GPL may be contained in a paper document, a computer file or on a referenced Internet location. By modifying or distributing the program (or any work based on the program), a receiver indicates his or her acceptance of the GPL and all GPL terms and conditions for copying, distributing or modifying the program or works based on it (Art. 5 GPL). Between a user and the copyright holders, valid licenses may very well ensue. After all, the user needs the license to copy, modify and redistribute; it is in his own interest to accept, which in turn is an argument for finding that these technical acts may legally be seen as acceptance of a license. The bottleneck is in the notification. A click-wrap license may be sufficiently notified, because you cannot proceed without clicking an accept button; a browse-wrap license not, because you are able to ignore it while installing the software. The degree of notification is a particularly pertinent problem because the licensor has no control over the form in which the license is being notified once the persons to whom he has distributed the program start redistributing it.

Assuming that a user can be bound by the GPL, a second issue must be addressed: the perpetuity of the GPL across redistributed versions. Perpetuity depends on each licensee 'notifying' the GPL to its successor. Ideally the following happens. If A provides GPL licensed software to B and notifies the GPL, a license between A and B ensues, assuming that B accepts the license. If B modifies the software and provides it to C, while notifying the GPL to him, two new licenses ensue, one between B and C and one between A and C.[11] B is the licensor of his modifications and A is the licensor of (what remains of) his original program. However, if C provides the software to D, but fails to notify the GPL, the chain breaks. It may simply be that C fails to notify the GPL altogether or it may be that what C does is found not to constitute sufficient notification. An important question in this respect concerns the position of users downstream of a rupture, such as D. This issue is addressed in Article 4 GPL:

> 'You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies,

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10. D. McGowan, 'Legal Aspects of Free and Open Source Software', in J. Feller, B. Fitzgerald, S.A. Hissam and K.R. Lakhani (eds.), *Perspectives on Open Source and Free Software*, Cambridge (Mass) MIT Press, 2005, pp. 361-392.
11. *See* Art. 6 GPL: Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the *original* licensor to copy, distribute or modify the Program subject to these terms and conditions' (emphasis added).

> or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.'

If someone does not comply with the GPL, he loses all rights under the GPL, including his right to (re)distribute. If he, while lacking the right to do so, distributes the program under the GPL, one would expect that the position of the person to whom he distributes (the receiver) is in limbo, since he has received from a person who was not authorized to distribute. The chain is broken. However, the final sentence of Article 4 GPL places the recipient of the program in a position comparable to the one he would have been in had he received the program from an authorized distributor. As long as he complies with the GPL, his license will not be 'terminated'. This may however not solve all problems. If the software is distributed without notice of the GPL, the last sentence of Article 4 GPL does not apply. Whether the receiver may actually rely on the (non-GPL) license is uncertain.[12] Another problem concerns the situation in which the receiver did not receive the source code. Non-availability of the source code may prevent him from redistributing the (modified) software in compliance with the GPL.[13]

Is the GPL capable of keeping software in the domain of free and open source?

On occasion 'proprietary' code ends up in an open source program. This may have happened without authorization of the owner of proprietary code. It may also be that a programmer who has regularly contributed to the open source program later withdraws the license regarding his modification, effectively making his code proprietary. The latter seems to be entirely possible.[14] The *SCO v. IBM* case, mentioned above, is the latest incarnation of the proprietary code lines problem reaching the court. SCO alleged that IBM has contributed SCO's proprietary UNIX codebase to the open source Linux operating system. SCO has hitherto not been able to show that it owns copyrights in (parts of) the Linux code.

The problem of a proprietary code owner formulating claims against open source programs is thus very real. What is more difficult to ascertain is what the impact would be if such a claim were successful. In a black scenario, users of open source software all over the world would have to stop using the program with all the dire consequences for the continuity of their activities. In an even worse scenario, the trust of the public in the open source model would vanish and in the end the open source movement would cease to exist. Fortunately, this is a very pessimistic scenario. Other scenarios are also possible and perhaps more likely. In the time it takes to bring a case concerning a 'polluted' open source program to fruition, new lines of

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12. For Dutch law, *see* L. Guibault and O. van Daalen, *Unravelling the Myth Around Open Source Licences*, The Hague, T.M.C. Asser Press, 2006; and K.J. Koelman, 'Terug naar de bron: open source en copyleft', 8 *Informatierecht/AMI* 149-155 (2000).
13. Even without source code it is possible to modify software, although it is much more burdensome.
14. *See* McGowan, *supra* note 15.

code could be written replacing the alleged proprietary lines. Even if a single open source program goes down, this may not drag the entire open source model with it. Perhaps the copyright owner of the proprietary code lines is willing to give users of the open source program a license under reasonable terms. For what we have seen hitherto, it is much too early to proclaim that the problem of code pollution will seriously hamper the open source movement.[15]

Liability issues

The GPL excludes all liability (see Articles 11 and 12 GPL). No copyright holder or other party who may modify and/or redistribute the program as permitted under the GPL can be held liable for damages arising out of the use or the inability to use the program. It has been contended – *inter alia* by Hoeren – that this disclaimer is untenable under European law. In Europe, an exclusion of responsibility that encompasses intentional behavior is not valid.[16] This also holds for product liability, assuming that product liability is applicable to software. It is after all still unclear as to whether software is a product.

It could be that the GPL needs modification in this respect. There is no reason why it would be impossible to make a disclaimer that is acceptable under European liability laws. The effect of such corrective action may however seriously be dampened by the fact that much software has already been distributed under version 2.0 of the GPL. The disclaimer as phrased in version 2.0 of the GPL binds those who have accepted the GPL in the past.

It is said that liability issues have a deeper impact with open source than is the case with proprietary software. For users of open source software, it is often unclear who is liable for bugs in open source programs. The absence of a party that can be held liable may act as a disincentive to use open source software.

For developers of open source software, liability for bugs may have far-reaching consequences as well. Developers of proprietary software often find themselves under the protective umbrella of the software house in which they are employed. It is unclear whether developers in the open source model can count on comparable protection from their employers or open source organizations.

My assessment is, however, that liability issues act far less as a driver for behavior then is sometimes assumed. Liability issues will probably not hinder the development of open source software. That, of course, does not take away that one high profile case may do more harm to the open source movement than a thousand open source projects that run without any liability hiccup.

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15. The term 'code pollution' is an idea of Professor P.B. Hugenholtz.
16. Compare e.g. Art. 12 Directive 85/374/EEC OJ L 210, p. 29 and Art. 3(3), Annex sub b. Directive 93/13/EEC OJ L 95, p. 29.

3.3. THE END OF COPYRIGHT AS WE KNOW IT?

Eben Moglen, general counsel of the FSF, predicts the end of software copyright.[17] He argues that copyright focuses on the wrong 'driver' for software development. Not material profit, but the human innate desire to create is the real driver of software development. The free software model builds on this insight and will consequently be the surviving model. This raises the question of what drivers copyright tries to capitalize on, and whether the free and open source models actually thrive on mankind's irrepressible urge to create.

Under utilitarian theories about the rationale of copyright, it is assumed that the creation of works benefits society. An individual maker will, however, only be inclined to create works if he can earn a living in doing so. Since works have the characteristics of a public good it is hardly possible to earn a living from the exploitation of one's work, absent copyright protection. Once copies of the work are in the hands of the public, the price of the work will converge to the marginal cost of distribution and the author may have difficulty in recouping his initial investment in the creation of the work. Government intervention is needed to reduce this problem. The chosen form of intervention – the attribution of exclusive rights to the author – helps him earn a living from his creation.

If exclusivity is not available or – as is the case with free and open source software – not used for recouping investment, neo-classic economics predict underproduction of works. The production and existence of free and open source software may however be seen as an indication negating the prediction of underproduction. In its wake, it calls into question the utilitarian rationale of copyright. In order to see whether this really is the case, I will first look into the reasons why free and open source software is produced at all; from an economic perspective, there is seemingly no incentive to do so.

Two 'schools of thought' explaining this apparent paradox can be distinguished. The first bases the willingness to write open source on a gift culture that is (claimed to be) preeminent in open source communities.[18] Just being able to use the software is enough reward to altruistically add code to the software. Although this is entirely possible it is unlikely that an individual makes a sizeable contribution to the software on this basis.[19] The second school of thought is based on the idea that open source software is somehow linked to something else, e.g. a private good or an exclusive service, through which it is possible to earn money. The writing of open source software does not bring its author a direct monetary reward, but the related activity

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17. E. Moglen, 'Anarchism Triumphant: Free Software and the Death of Copyright', in N. Elkin Koren and N. Weinstock Netanel (eds.), *The Commodification of Information*, The Hague, Kluwer Law International 2002, pp. 107-131.
18. Compare L. Torvalds and D. Diamond, *Just for Fun: The Story of an Accidental Revolutionary*, New York, Texere 2001.
19. R. van Wendel de Joode, J.A. de Bruijn and M.J.G. van Eeten, *Protecting the Virtual Commons: Self-organizing Open Source and Free Software Communities and Innovative Intellectual Property Regimes*, The Hague, TMC Asser Press 2003, Information Technology & Law Series, p. 40.

does. The related activity is dependent on, or at least enhanced by, the creation and availability of free or open source software. The link to the exclusive good or service can take on many forms. A programmer may earn a good reputation by writing free or open source code. This is consistent with the value that is placed on attributions in open source communities. This good reputation may translate itself into job opportunities. A software company may earn money by adapting free or open source software to the specific needs of a company. A software company may earn money by packaging open source software in such a way that it is useable for uninitiated users. A hardware producer may need software in order to stimulate the sale of its hardware products; it may even try to turn its hardware into the industry standard. For instance Sun has stimulated the development of Java open source software in order to increase the sale of its servers.[20] In sum, writing free or open source software is not an activity that can 'support' itself, but it can be an indirect means to earn money. Where organizations such as local governments initiate the development of open source software, this may be done in order to further organizational or governmental purposes and prevent dependence on commercial software providers.

Whether the creation of open source software stems from the innate desire to create or from more utilitarian considerations is difficult to assess.[21] It is largely dependent upon the circumstances, such as the person of the code writer, the type of software project, the availability of opportunities to embed a project in a 'utilitarian' context, etc. It is unlikely that a single general answer exists. What the flourishing of open source and free software does illustrate is that it is not always necessary to exercise the exclusive rights granted under copyright in the traditional way. There are alternatives. But this does not mean that the proprietary model has become superfluous. Most software is still produced under a proprietary regime and this situation is likely to remain for some time.[22] It is therefore far too early to proclaim the end of the proprietary model or even the end of software copyright.

3.4. TECHNICAL PROTECTION AND OPEN SOURCE

In compliance with the WIPO Copyright Treaty of 1996, legal provisions regarding the use of technological protection measures were embraced in both the US and Europe as important instruments for the protection of intellectual property. Circumvention of technical protection measures, such as copy protection, was declared illegal, as was the provision of means for circumvention. The underpinnings of technological

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20. R. van der Ploeg, M.L. Vos and F. Nauta, *De informatiesamenleving bij voorbeeld. Hoe ICT inwerkt op de samenleving*, Amsterdam, Amsterdam University Press, p. 82.
21. Y. Benkler, 'Coase's Penguin, or, LINUX and the Nature of the Firm', *Yale Law Journal* 369-446 (2002), at p. 446.
22. K.M. Schmidt and M. Schnitzer, 'Public Subsidies for Open Source? Some Economic Policy Issues of the Software Market', 16 *Harvard Journal of Law and Technology* 474-501 (2003), at p. 500.

protection are however difficult to reconcile with the ideas underlying open source software. Given their opposed rationales, technological protection is bound to be at cross-purposes with open source software. As long as technological protection and open source software operate in separate, well-divided areas, frictions may not occur, but such separation cannot be long-lived in an interconnected world and collisions are bound to happen.

A conflict is likely to arise, for instance, if it is impossible to avoid technological protection for an open source program. A major content provider could, for instance, force hardware manufacturers to embed technological protection devices in their products, without which it is impossible to (dis)play protected content. Or, even worse, legislation could be promulgated that mandates the incorporation of technological protection in certain devices. It would thus not be possible to have open source versions of these devices. For example, content might not be playable on DVD players in Linux systems unless proprietary software would be tolerated in an otherwise open source system. LinDVD of Intervideo is an example of an 'approved' closed DVD player that works under the Linux operating system.

The fundamental danger here is that technical protection can be used to push out open source software. This is an undesirable effect of legal protection of technical protection measures. How can we avoid this? It will be difficult to reconcile technical protection measures with open source models. Should 'approved' technical protection be available in open source form? Existing legislation with respect to technical protection measures hardly limits rights holders in the design of the technical protection measures they employ. According to Article 6.4 of the Information Society Directive,[23] rights holders must make sure that beneficiaries of certain limitations of copyright can actually make use of those limitations, but the legislation does not prescribe under what license the protection technology must be made available.

Another possible way of reconciling technical protection with open source is to permit cracking a protection measure in order to play a work on the machine or with the operating system that one has installed, e.g. Linux. The Danish Copyright Act allows for cracking of technological protection under the following circumstances.[24] First, the Copyright Tribunal must have ordered a rights holder to provide the beneficiary of an exception with the necessary means to benefit from the exception. If the rights holder has not complied with the order within four weeks, the beneficiary may circumvent the technical protection. This only applies to users that have legal access to the work. It goes without saying that the 'cracking' option is at odds with the legal protection of technical protection: if cracking is allowed for the mentioned purpose, it will be difficult to prevent the crack being used for other purposes as well, such as the copying of a work.

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23. 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, Official Journal L 167, 22/06/2001 pp. 10-19.
24. *See* Art. 75d Danish Act on Copyright 2003, <www.kum.dk/sw4550.asp>.

3.2. OTHER TYPES OF INFORMATION THAN SOFTWARE

The relative success of open source model with respect to software raises the question as to whether the model can also work for other types of information. Could it be effective for text, pictures, sound or movies? The Creative Commons initiative seems to indicate a positive answer. In this section, I will explore two issues that have some bearing on the question. First I will concentrate on factual differences between software and other types of information. I will then deal with issues concerning the way makers perceive their works and the ideas they have about the respect that others should have for the work.

An important difference between software and other types of information is that software has a separate source code. Admittedly, HTML pages also have a source code, but this code is distributed with the corresponding 'web page'; it is impossible to keep the source code secret. Furthermore, if one would want to consider the web page as it is seen by the surfer to be the object code, it is clear that modifying the text is relatively easy; there is no need for complicated and expensive reverse engineering. In sum, other types of information do not feature a source code in the same way as software does. Does this make open content models essentially different from free and open source models? Although the name 'open source' may suggest otherwise, the free availability of the source code is but one aspect of free and open source models. The right to use, modify and redistribute are features that lend themselves perfectly to other types of information than software. This is even more the case because they do not have a source code as software does.

Another obstacle for bringing other information into a free or open source model may be moral rights. 'Moral' issues may however also arise in the context of free and open source software. Attribution of work is considered of primordial importance in free and open source communities. Removal of attribution from the software is almost considered a mortal sin. What is remarkable then is that this respect for the *paternité* of code has come up in bottom-up fashion. It is something valued by the members of the communities themselves, not a result of applying the law of copyright. The copyright law of the United States, where the free and open source movements originate, does not protect the moral rights of computer programmers. At the same time we see that modification of a work is encouraged by these communities, and is not perceived as a lack of respect for the original code writer.

The free and open source model is now spreading to other geographical areas such as Europe, where copyright statutes do protect moral rights. It is also spreading to other types of information than software. It will be interesting to see whether the norms of the open source community will migrate as well. In general, code writers do not seem to mind that somebody else picks up their code and changes it, a long as they are credited for their original work. Although this is to some degree speculative, this may be something that is inherent to the functional character of software. If somebody needs another functionality it is only natural that he should be allowed to adapt the software to his own needs. Will such a pragmatic attitude also spread to other forms of open content? The author of a picture may perhaps not mind that someone else reproduces his picture even though he sees the picture as his personal

creation. He may be perfectly happy to have other people use the picture in their works, but would perhaps be annoyed if someone modified it. Of course, it is pure speculation what the 'feelings' in those other communities will be. It does however seem to me that if the 'feelings' with respect to what somebody may or may not do to a work – other than software – would appear to be more rigid, communities with respect to those other forms of information would certainly be different in character. Article 6bis of the Berne Convention provides a powerful legal argument to those less open-minded with respect to their works by recognizing two moral rights:

> 'Independently of the author's economic rights, and even after the transfer of the said rights, the author shall have the right to claim authorship of the work and to object to any distortion, mutilation or other modification of, or other derogatory action in relation to, the said work, which would be prejudicial to his honor or reputation.'

The second of these two rights is the right of integrity (*droit au respect*). By making a work available under an open content license, the author allows for the modification of his work. A problem could be that the author perceives a modification as a distortion and seeks to block further distribution of the 'distorted' work. It will not always be easy to discern between modifications that are distortions and those that are not. The conditions under which a work was made available by the original author are a factor in this determination, as may be other circumstances, such as the nature of the project or the work.

4. THE ROLE OF GOVERNMENT IN OPEN SOURCE

Government may develop several policies with respect to open source software. In the first place, government can stimulate the use of open source software in its own ranks. The aim of such policy may be to reduce the costs of licensing software, to reduce dependence on providers of proprietary software or to enlarge the transparency of government. One could say that in doing so the government addresses the negative consequences of commodification that hurt government itself. In the second place, government might try to stimulate the development and use of open source software in general. The free availability of open source software to anyone who wants to have it, and the beneficial effects this has on innovation, may be the principal reason to do so. Since software has the attributes of a public good, neo-classic economics predict underproduction, thus lessening the beneficial effects open source software could have for society. Government could counteract the underproduction by stimulating open source software development by providing means for open source software development. Government could also stimulate open source by facilitating interoperability legally. But should it?

What considerations should lead government policy in matters regarding free and open source software models? Should government decide for us what software model is the best? Both models have their advantages and drawbacks. It may not

be so easy to determine what model suits what situation. As it is unclear what is wisdom in these decisions, perhaps government should relinquish the question of what software model is best altogether. It should leave the choice to the software users; so allocation should be left to the market, and government not promote free and open source. It should make sure that both models can co-exist. Choice for software users is a quality that is worth preserving. More generally, variety in software models should be fostered.

As we have seen above, one of the bigger threats to variety in software models is open source software 'polluted' by proprietary code. Claims of copyright or patent infringement could reduce trust in free and open source models and perhaps even undermine the public's willingness to work with free and open source software. It is not so easy to see what a government could to do to lessen the risk this phenomenon poses to the free and open source software model. One thing that might be done is to change the law and grant downstream producers and users of free and open source software a 'grace period'. Upon discovery of copyright or patent infringement, downstream producers and users would be allowed to continue to use the open source software for the duration of the grace period. In the meantime the infringing pieces of proprietary code could be replaced by newly written free or open code. Of course such a grace period should be narrowly construed, since it has the potential to frustrate enforcement of intellectual property rights. Only a court should be competent to grant a grace period; i.e. it would not be something that automatically takes effect. The grace period should only be applied to free and open source software that is 'officially' released by a company willing to take responsibility for the software. A court would only grant a grace period if it is satisfied that the company releasing the free or open source software has undertaken sufficient action to ensure that the code as released did not contain proprietary software. The company can satisfy this burden by showing that it had a policy in place for detecting proprietary code and that it can show that it adhered to its own policy.

For the owners of proprietary software, a grace period would have the advantage that they can still protect their 'property'. For the free and open source communities the advantage would be that the continuity of the free and open source model is ensured, if reasonable measures are taken to keep free and open source software free of proprietary code. It would also direct users of free and open source software to 'official releases', since a grace period would only apply to these. Society would win because it would have a variety of software models to choose from.

At the same time, such change would evoke a number of difficult questions. Why should only free and open source software makers benefit from such a grace period? Is the empirical evidence that the open source model is under pressure hard enough? How does such a grace period relate to obligations for states to provide effective legal remedies against infringements of intellectual property rights, as enshrined in the TRIPS Agreement? And perhaps the most difficult question of all: why should the makers of free and open source software not be alert to copyright and patent infringement, just like everybody else? It is clear that the introduction of a grace period can only be contemplated if the free and open source models are proven to be seriously under pressure; at present this is certainly not the case.

An argument against software variety could be that it decreases beneficial network effects. Network effects occur when many people use the same (or compatible) product or service. With every new participant in the network the value of the network increases. In my opinion, however, the lack of network effects carries little weight as an argument against variety and choice in software models. In principle, everyone is free to choose and use the software he sees fit to use. If government wants to increase network effects, government should not prescribe a certain technology. Government should not try to exert influence on the choice of technology or licensing model.[25] If government seeks network effects it should try to do so by enhancing interoperability. We have seen a similar development in telecommunications law. In Europe, we have gone from a situation of singular state-owned telecom operators to a liberalized market (i.e. a variety of providers). The network effects in the telecommunications sector were enhanced by an elaborate body of rules concerning interconnectivity. The energy market and its regulation are following a comparable development.

In the copyright domain, only weak incentives exist to promote interoperability. The European Software Directive provides for some exceptions that facilitate interoperability to a certain extent. Article 6 of the Directive allows for reverse engineering for the purpose of interoperability in certain limited circumstances.[26] Even with this provision in place, the scope for reverse engineering is still very limited. The conditions set by Article 6 are very strict, and reverse engineering is a costly undertaking. Moreover reverse engineering does not yield the source code, but something that could at best be called a shadow of the source code.

Another provision that might help to achieve interoperability is Article 5 of the Software Directive. This provision allows a lawful user of a program 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. The pivotal point is that he who wants to observe, study or test has to derive the permission to reproduce the program from elsewhere. So the provision is of limited use in practice. Of course a party wishing to make interoperable software may acquire a 'negotiated' permission to decompile or even 'negotiated' access to parts of the source code it needs. In such case there is no need to bring about additional regulation.[27] If, however, interoperability suffers because access to parts of the pertinent proprietary software is lacking perhaps further legislative measures, such as mandatory access to source code, should be considered.[28]

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25. *See* D.S. Evans, 'Politics and Programming: Government Preferences for Promoting Open Source Software', in R.W. Hahn, *Government Policy toward Open Source Software*, Washington, AEI-Brookings Joint Center for Regulatory Studies 2002, pp. 34-49.
26. Council Directive of 14 May 1991 on the legal protection of computer programs (91/250/EEC) Official Journal of the European Communities No. L 122, 17/05/91 p. 42.
27. Compare E. Mackaay, 'Intellectual Property and the Internet: The Share of Sharing', in N. Elkin Koren and N. Weinstock Netanel (eds.), *The Commodification of Information*, Information Law Series, The Hague, Kluwer Law International 2002, pp. 133-146, at p. 146.
28. Compare M.A. Lemley, 'The Economics of Improvement in Intellectual Property Law', 75 *Texas Law Review* 989-1084 (1997).

5. CONCLUSION

Is the open source model an answer to the commodification of information? This chapter has concentrated mainly on computer software. As it appears, open source lends itself conceptually very well to counteracting commodification. It offers an alternative to the proprietary model of software exploitation. Royalty-free availability, modifiability, and free redistribution are important cornerstones of the open source model.

The main question is whether the open source model can realize its potential as an alternative to the proprietary model. The *SCO v. IBM* case indicates that there is strong rivalry between the models and that players avail themselves of all legal means to reach their goals. As this chapter has shown, there are a number of potential obstacles. Technical protection measures and their legal protection may be used to push out open source software. The 'pollution' of open source software by lines of proprietary code is sometimes used to argue against open source. These issues are a continuous threat to the co-existence of the open source and the proprietary models. So far, the open source model has held itself well and there appears to be no reason for immediate government intervention. Even so, it is important to reflect upon the rationales of a government policy, if only to indicate the reasons underlying the current policy of non-intervention. In my opinion, the co-existence of the open source and proprietary models should be the cornerstone of any government policy. Government should refrain from explicit endorsement of free and open source models. After all, there is no irrefutable evidence that one model is to be preferred over the other.

A government strategy with respect to free and open source software should, in my view, be based on three starting points:

- Government should foster variety.
- Government should keep a close watch on the issue of interoperability.
- Government should remove practical barriers to the development and use of free and open source software.

The first starting point must ensure co-existence of the different models. At present, the largest threat to co-existence seems to come from 'proprietary' right holders claiming that free and open source software contain proprietary code. Protagonists of free and open source software may find it difficult to defend themselves against such allegations. The open development process of free and open source software arguably enhances the chance that proprietary software ends up among free or open source software. Such 'infringement' is difficult to detect for the protagonists of free and open source software, but easy to detect for proprietary software owners. The availability of the source code acts here against the open source community: detection of infringement is easier. Even so, this should not be a large drawback. The occurrence of infringements is probably only incidental. Moreover, it is difficult to see what government could do to protect the free and open source software communities against the risk of code pollution, apart from use legislation. In this

chapter, the idea of a grace period for free and open source software communities has been presented.

The second starting point focuses on interoperability, meaning not only that computer programs can work together but also that content can be (dis)played on platforms, irrespective of the licensing models used. For the viability of both the open source and the proprietary models, interoperability in this sense is vital. As we have seen, technical protection measures do require extra attention with a view to interoperability. They can be used to reduce interoperability in a way that makes open source software less attractive.

The third starting point is meant to take away some practical barriers to the co-existence of the different models. These measures must not be used to give free and open source models an advantage.[29] They merely serve to establish a level playing field. Many open source companies are, for instance, too small to participate in tender procedures in the Netherlands, simply because the required minimum size is set too high. Another example may be the provision of information about free and open source initiatives. The concept of free and open source software is after all still relatively new, and many decision makers do not feel comfortable with the concept. Information provision could help to overcome 'cold feet'. The OSOSS initiative in the Netherlands is an example of a government-led initiative that aims to provide better information to local governments and agencies about open source software and open standards.

29. Compare L. Lessig, 'Open Source Baselines: Compared to What?', in R.W. Hahn, *Government Policy toward Open Source Software*, Washington: AEI-Brookings Joint Center for Regulatory Studies 2002, pp. 50-68.

Chapter XIV

Exploring Creative Commons: A Skeptical View of a Worthy Pursuit

Niva Elkin-Koren

1. INTRODUCTION

Creative Commons is a non-profit US-based organization, which operates a licensing platform to promote free use of creative works. This innovative initiative is using license agreements for the purpose of strengthening the public domain. The high cost associated with securing a license to use works becomes a serious obstacle for the use and reuse of works created by others. By reducing the legal costs associated with the use of creative content, Creative Commons seeks to make it easier for non-profit players to engage in creative enterprises. The licensing platform aims at lowering the transaction costs of both licensing and acquiring a license for reuse. At the producer's end, authors are offered a licensing scheme for distributing their works for non-commercial use while at the same time safeguarding those works against abuse and misappropriation of their efforts by asserting copyrights. The idea is to facilitate the release of creative works under generous license terms that would make works available for sharing and reuse. At the users' end, the platform is expected to make it easier for prospective creators to identify works, which are available under generous terms, for subsequent creation.

Creative Commons advocates the use of copyrights in a rather subversive way that would ultimately change their meaning. Its strategy does not aim at creating a public domain, at least not in the strict legal sense of a regime that is free of any exclusive proprietary rights. The strategy is entirely dependent upon a proprietary regime and drives its legal force from its existence. The normative framework assumes that it is possible to replace existing practices of producing and distributing informational works by relying on the existing proprietary regime. The underlying assumption is that, if intellectual property rights remain the same but rights are being exercised differently by their owners, free culture would emerge.

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 325–345

This chapter explores the legal strategy of Creative Commons and analyzes its potential for enhancing the sharing, distribution and reuse of creative works. The chapter focuses on Creative Commons' strategic choice to rely on property rights and on viral contracts to promote free culture. The reliance on contracts is particularly intriguing as commentators around the world were alerted by the increasing use of contracts to restrict access to creative works, and were concerned with its potential implications on weakening the public domain.

While I share Creative Commons' concern with copyright fundamentalism and its risks for innovation and liberty, I am more skeptical of its strategy. The legal strategy, which empowers owners to govern their creative works, facilitates a far-reaching coalition among libertarians and anarchists, anti-market activists and free-market advocates. The analysis demonstrates that while ideological diversity may be crucial for the successes of a social movement, it may impair attempts to make creative works more accessible. The lack of a core perception regarding free access to and use of information, may lead to ideological fuzziness. This could interfere with the goal of offering a workable and sustainable alternative to copyright. Furthermore, in the absence of commitment to a single (even if minimal) standard of *free access to and use of information*, Creative Commons' strategy is left with the single unifying principle which empowers authors to govern their own work. This chapter argues that such a strategy could spread and strengthen the proprietary regime in information. The lack of standardization may further increase the cost to end-users in determining the duties and privileges related to any specific work. Thus, the proliferation of contractual terms could increase uncertainty among end-users and create new barriers to access.

2. IDEOLOGY AND STRATEGY

Creative Commons is a social movement, which was founded in 2001[1] as a non-profit organization, seeking to expand 'the range of creative work available for others to legally build upon and share'.[2] In essence, Creative Commons' ideology could be summarized as follows: 1) Creativity relies on access to and use of preexisting works; 2) Copyright law creates new barriers to accessing works and becomes an obstacle for sharing and reusing creative works; 3) The high costs associated with the copyright regime affect individuals in particular, limiting their ability to access and reuse creative works; and 4) Copyrights could be exercised in a way that would promote sharing and reuse.

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1. *See*: Wikipedia – The Free Encyclopedia, *Creative Commons*, available at <en.wikipedia.org/wiki/Creative_commons>; the official Creative Commons website, available at <creativecommons.org/>.
2. Id.

2.1. WHAT IS WRONG WITH THE CURRENT COPYRIGHT REGIME?

Creative Commons perceives the current copyright regime as the major obstacle for creative activity. Creation of informational works typically involves two types of resources: prior works and human capital – the quality of which may depend upon sufficient exposure to prior creation. 'Creativity always builds on the past' announces the short video[3] describing the purpose of Creative Commons, and copyright law creates new barriers on access to creative works. It provides owners with a set of exclusive rights to their creative works, thereby imposing correlative duties on non-owners. Non-owners are required to acquire a license for every use of a work that is covered by these rights (with the exception of fair use). The barriers to access are thus effectuated by two separate aspects of copyright law: first the legal right to restrict access and to apply for injunction in case of unauthorized use,[4] and second, the information costs associated with securing a license. Creative Commons' strategy accepts the first and focuses on the latter.

Copyright law creates relatively high information costs, due to the nature of copyright subject matters: non-tangible assets. Every property right imposes information costs related to ascertaining the contours of legal relationships pertaining to the owned asset and determining the boundaries of goods to which it applies. In the case of copyright, these costs tend to be prohibitively high due to several reasons. The first is that rights in creative works are not intuitive. Copyright law has been around for almost 300 hundred years, but has yet to become a familiar concept. Creative works are abstract assets, and often lack physical boundaries. A novel may be printed in a book, but the physical printed format that embodies the novel does not indicate the set of rights associated with the copyrighted work, and the corresponding obligations it imposes on readers of the novel. The owner of a copy of the book may read it or use the pages as wrapping paper, but may not reproduce the novel. The absence of physical boundaries makes it difficult to determine in advance whether any property rights were invaded.[5] The more abstract the asset is, the higher the costs, which are involved in gathering information regarding the scope of rights in that asset. Second, the cost of ascertaining the scope of the copyrighted subject matter is relatively high.[6] Copyright law applies to protected expressions but does not protect ideas. While some ideas may be extracted, the legality of

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3. J. Cone, *Building on the Past*, Creative Commons, at <creativecommons.org/learnmore>.
4. A property rule requires authorization prior to use. A license to use creative works may not always be available, and even when owners are willing to license their works they may charge royalties for use.
5. This was long recognized by W.J. Gordon, 'An Inquiry in the Merits of Copyright: The Challenges of Consistency, Consent, and Encouragement Theory', 41 *Stanford L. Rev*. 1343-1468 (1989). *See also* C. Long, 'Information Costs in Patent and Copyright', 90 *Virginia L. Rev.* 465-549 (2004) (arguing that intellectual property presented information costs higher than those presented by real property. Trespassing real property involves physical intrusion, and does not require an understanding of the attributes and qualities of the protected asset).
6. Long, *supra* note 5 (arguing that the different structure of patent and copyright reflects the demands that different kinds of protected goods placed on our ability to process information,

copying the plot of a novel or borrowing the characters would require elaborate legal analysis.[7] The scope of copyright protection is not evident, and the average user would hardly know what aspects of the work are protected (expressions but not ideas) and what uses are prohibited without a license (copying but not reading). Consequently, people would often find it too burdensome to define the exact scope of protection and would simply assume that the entire work is protected. This would further strengthen copyright chilling effect.

The cost associated with licensing copyrighted materials has increased expeditiously in recent years. The proprietary regime in recent years covers more informational works. It affords protection to types of works, or new aspects of works, that used to be in the public domain. For instance, copyright and neighboring rights afford protection for facts and mere data.[8] The copyright bundle of rights was expanded and now covers a wider range of uses; for instance, the right to prevent unauthorized access to works in digital format.[9] The expansion of copyright protection to cover more subject matter (such as data), extended duration[10] and additional rights, reduces the volume of works that are freely available to build upon.[11] Furthermore, not only the expansion of copyrights, but also some characteristics of the digital environment make informational works less available. For instance, overlapping rights,[12] held by different rights holders, make it more costly to secure a license to use a copyrighted work. Another example is the use of Digital Rights Management

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and seeks to promote efficiency, by minimizing the information cost presented by intellectual goods).

7. *Nichols v. Universal Pictures Corp.*, 45 F.2d 119 (2nd Cir. 1930).
8. *See* Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, 1996 OJ (L 077) 20-28; for the US policy towards licensing enforcement, *see ProCD Inc. v. Zeidenberg*, 86 F.3d 1447 (7th Cir. 1996); *see also* J.H. Reichman and Paul F. Uhlir, 'A Contractually Reconstructed Research Commons for Scientific Data in a Highly Protectionist Intellectual Property Environment', 66 *Law & Contemp. Probs.* 315-462 (2003).
9. *See* Digital Millennium Copyright Act of 1998, Pub. L. No. 105-304, 112 Stat. 2860 (codified as 17 U.S.C. §1201); Council Directive 93/98/EEC of 29 October 1993 harmonizing the term of protection of copyright and certain related rights, 1993 OJ (L 290) 9 -13, Art. 6. Another example is the limitation on the first sale doctrine (prohibition on rental of CDs and computer programs). 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, 1992 OJ (L 346) 61-66; Council Directive 91/250/EEC of 14 May 1991 on the legal protection of computer programs, 1991 OJ (L 122) 42-46.
10. The duration of copyright protection in the US used to be shorter and was recently extended to life plus 70 years for non-corporate works. For works owned by corporations (works for hire) copyright duration is 95 years from publication or 120 years from creation, whichever is shorter (*See* 17 U.S.C. §302).
11. L. Lessig, *Free Culture*, New York, Penguin Press, 2004; J. Boyle, 'The Second Enclosure Movement and the Construction of the Public Domain', 66 *Law & Contemp. Probs.* 33-74 (2003); D.S. Karjala, 'Federal Preemption of Shrinkwrap and On-line Licenses', 22 *U. Dayton L. Rev.* 511-542 (1997).
12. M.A. Lemley, 'Dealing With Overlapping Copyrights on the Internet', 22 *U. Dayton L. Rev.* 547-585 (1997).

(DRM) to govern the use of works and physically limit access and use, coupled with anti-circumvention legislation.[13] Overall, expansive copyrights, supplemented by extra protection under other bodies of law,[14] create new barriers to accessing preexisting materials.[15]

The need to secure permission prior to any use makes it very expensive, and often impossible, to use other people's works for further creation and distribution. The process of identifying the owners, determining the legal status of the work and negotiating the terms of use, often involve prohibitively high transaction costs. In some cases, transaction costs related to copyright would constitute a high portion of the total cost of using works. Consider, for instance, a public school teacher seeking to license materials for distribution in her class. Individual authors of poems or articles, if they own the rights, would tend to authorize such use of their works free of charge. Yet, identifying the rights holder, locating her and negotiating a license, is likely to be prohibitively expensive. If a public school teacher seeks to use the work once, she may not find it worthwhile to incur the information cost, and may give up the pursuit altogether.

From the perspective of rights holders, authorizing uses may also be expensive. It may require legal counseling regarding the scope of copyright protection, the legal definition of authorized uses and the legal language used to describe them. Rights holders are more likely to incur the cost of licensing when they expect to benefit, i.e., when they license the work for commercial use. They may be reluctant, however, to incur the high cost of licensing for non-commercial uses. Consequently, licensing costs may prevent the use of works that would otherwise become available, thus impeding access and subsequent creation. Thus, the high transaction costs associated with the copyright system may create a chilling effect and reduce the level of desirable uses.

2.2. CREATIVE REMEDY: A LICENSING PLATFORM

Creative Commons offers to remedy the deficiencies of current copyright law by designing an innovative licensing scheme. The initiative develops an infrastructure, legal and technological, that arguably could overcome the impediments to accessing creative works, thereby reducing the chilling effect on creativity caused by the high cost of licensing. The automated licensing platform allows authors to retain copyright in their respective works, and authorize as many uses of the work as they choose.

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13. 17 U.S.C. § 1201.
14. For example, misappropriation, the right of publicity and breach of contract. Breach of contract related to copyrighted materials was not considered to be preempted under US copyright law if the alleged breach involves an extra element, other then an infringement of any of the exclusive rights under §106 of the 1976 Copyright Act (*see Vault Corp. v. Quaid Software Limited*, 847 F. 2d 255 (5th Cir. 1988).
15. *See* Creative Commons, *'Some Rights Reserved': Building a Layer of Reasonable Copyright*, Creative Commons – About, at <creativecommons.org/about/history>.

The hope is that such a mechanism would make it easier for rights holders to share their works under more generous terms.

The licensing process is standardized and automated, both at the *drafting end*, and at the *licensing end*. Drafting a license on Creative Commons' website, is a user-friendly automated process explained in plain language.[16] It involves a choice among modular contractual terms, designed to meet the diverse preferences of authors, and at the same time keep it simple and easy to employ. Rights holders can choose any combination of the following standardized terms: 'Attribution' (requiring credit to the author), 'Noncommercial' (authorizing all uses for noncommercial purposes), 'No Derivative Works' (authorizing the use of verbatim copies and prohibiting the creation of derivatives), and, finally, perpetuity. The 'Share Alike' (sa) license, creates a viral licensing scheme,[17] requiring creators of any derivative work to subject subsequent users of their derivatives to the same license which governed the original work. For instance, a flash movie posted on Creative Commons' website, 'Get Creative', is licensed under a license combination of 'Attribution', 'Noncommercial' and the 'Share Alike' types. Under this license a user is authorized to copy, distribute, display, and perform the work, and also make derivative works based on it, under the following conditions: The user must give the original author credit, she cannot use the work for commercial purposes, and in case she alters, transforms, or builds upon the work, she must distribute the resulting work under a license identical to the original.[18]

Once the choices are made, the version of the license is released in three layers: first, a legal enforceable format,[19] 'Legal Code' license, which intends to ensure that the license will stand up in court; second, human readable language[20] which explains in plain language the key issues addressed by the license; and finally, the license is distributed in a machine readable format.[21] The Digital Code makes it possible to automate the licensing process. Search engines would presumably allow automatic search for retrieving and locating works, which are available for use under Creative Commons' license, and automatically determine the authorized uses.

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16. *See* Creative Commons, *Choose a license*, at <creativecommons.org/license/>.
17. Margaret Jane Radin defines 'viral contract' as a contract in which restrictions on use are built directly into the digitized information content, thereby purporting to bind all subsequent users. The terms of viral contract are purported to run with an object regardless of whether the present user has manifested assent to the terms. *See* M.J. Radin, 'Humans, Computers & Binding Commitment', 75 *Indiana L. J.* 1125-1162 (2000), at pp. 1132-1133.
18. *See* Creative Commons, *Commons Deed*, at <creativecommons.org/licenses/by-nc-sa/1.0/>.
19. The 'Legal Code' license version intends to insure the license will stand up in court. *See* Creative Commons, i, at <creativecommons.org/learn/licenses/>.
20. The 'Commons Deed' license version is 'a simple, plain-language summary of the license, complete with the relevant icons'. *See* Creative Commons, *Licenses explained – Taking a License*, at <creativecommons.org/learn/licenses/>.
21. The 'Digital Code' license version is 'A machine-readable translation of the license that helps search engines and other applications identify your work by its terms of use.' *See* Creative Commons, *Licenses explained – Taking a License*, at <creativecommons.org/learn/licenses/>.

Creative Commons' strategy assumes that people want to share their work on generous terms. They further want to share the power to reuse and modify their works, as well as distributing them to others. The idea is to help people express this preference for sharing, by offering a set of licenses at no charge. The licensing platform would allow users to easily identify and locate creative works available for reuse. The proclaimed goal is to change the default rule created by copyright law. In a world of only copyright law the default is that every work is protected and that 'All Rights Reserved'. Consequently permission is necessary prior to each use. Creative Commons seeks to expand the variety of defaults, by facilitating new options for releasing works under less restrictive terms: 'Some Rights Reserved' or sometimes 'No Rights Reserved'.[22]

The licensing platform is based on the experience accumulated by Open Source movement.[23] Open Source Initiative itself offers a whole range of licenses for software, as well as licenses for other types of content such as software documentation.[24] Yet, in contrast to the GPL, Creative Commons' licensing scheme includes a wide variety of licenses. Every license that goes beyond absolute exclusion is considered to be sufficient instrument for promoting sharing and reuse. The licensing scheme is designed to make it possible to license works under a wide range of terms: from minimalist authorization to simply sample a musical composition to a broad waiver of all rights.[25] It is exactly this diversity of licensing options that makes Creative Commons' licensing scheme less effective.

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22. 'No rights reserved' (pd) is a dedication to the public domain. *See* Creative Commons, *Public Domain Dedication*, at <creativecommons.org/licenses/publicdomain/>. A license tailored for this is 'Founders' Copyright', which allows authors to shorten the duration of copyright to 14 or 28 years. *See* Creative Commons, *The Founders' Copyright*, at: <creativecommons.org/projects/founderscopyright/>.
23. For further information about the Open Source movement visit the Open Source website: <www.opensource.org/>. *See* also R.M. Stallman, *Free Software, Free Society: Selected Essays of Richard M. Stallman*, Boston, Joshua Gay (Free Software Foundation), 2002.
24. The Free Software Foundation promotes the GNU General Public License (GPL) for software, and the so-called GNU Free Documentation License (GFDL) for documentation. The GNU Free Documentation License (GFDL) designed for software documentation and other reference and instructional materials. The license was designed by the Free Software Foundation (FSF) for the GNU project. The license stipulates that any copy of the material, even if modified, carry the same license. Copies of the materials must be made available in a format which facilitates further editing. It allows commercial reuse, and requires that distribution of copies will be accompanied by an identical license. It does not comply with the Open Source guidelines for free software. The Open Source Imitative created a set of guidelines for a license to be considered Open Source, *See* Open Source*, The Open Source Definition*, at <www.opensource.org/docs/definition_plain.html>.
25. For instance, choosing the option of Founders Copyright would render copyright expiration date after 14 or 28 years.

2.3. IDEOLOGICAL FUZZINESS

Creative Commons is a form of political activism and is best understood as a social movement seeking to bring about a social change. Like its predecessors the Open Source Movement and Freedom of Software,[26] it seeks to change the social consequences of copyright law by instantiating an alternative. Unlike these movements, which focus on software and address a rather small and homogenous community of professionals, Creative Commons seeks to become a popular movement, which addresses the public at large. A key to its success is its ability to convince as many people as possible that Creative Commons is the right way to use creative works.

Lessig's trilogy[27] set the ideological foundation of Creative Commons, and *Free Culture* could be thought of as its manifesto.[28] In *Free Culture*, Lessig prescribes the two stages of the envisioned social reform: the first stage focuses on social norms and the second, focuses on legal reform. Defining the role of the Creative Commons movement as a crucial bottoms-up effort in initiating a social change, Lessig claims that 'once the movement has its effect in the streets, it has some hope of having an effect in Washington'.[29] Thus, after the first stage is accomplished and a significant number of people adopt Creative Commons' ideas, legislative changes should be made by the legislature.

Nevertheless, Creative Commons as a social movement has now gained a life of its own. It is a dynamic movement, consisting of many distinct players, motivated by different goals, and still in the process of defining its political agenda. This makes it difficult to accurately define the core principles of Creative Commons' ideology and the tenets of its reform plan. Creative Commons' ideology, as expressed in its publications and practices, reflect a minimalist appraoch, seeking to enhance access to creative works. Copyright law is clearly identified as an obstacle for achieving this goal; yet, its vision of what wold happen when it is removed is less coherent.

Creative Commons' ideology is somewhat reactionary. Its stated goals resemble the goals of copyright law as defined in the US Constitution, i.e., to promote the progress of science and the useful arts.[30] It does not call, at least not in this initial stage, for a copyright reform. Rather, it advocates exercising rights in a way that

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26. The free-software movement started in 1983 by Richard Stallman announcing the establishment of the GNU project. The goal of the movement is to promote freedom by replacing proprietary software which is distributed subject to restrictive licensing terms with free software. Some believe that all software should be free, claiming it is immoral to prevent people from using software, and that control over the use of a computer is necessary to safeguard other freedoms. Other, do not rule out copyright protection under all circumstances. *See* Wikipedia – the free encyclopedia, *GNU – History*, at <en.wikipedia.org/wiki/GNU>.
27. L. Lessig, *Code and other Laws of Cyberspace*, New York, Basic Books, 1999; L. Lessig, *The Future of Ideas*, New York, Random House, 2001; L. Lessig, *supra* note 11.
28. *See* Lessig, *supra* note 11, pp. 275-304.
29. Id. at 275.
30. US Const. Art. I, § 8, cl. 8: 'The Congress shall have Power … To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors, the exclusive Right to their respective Writings and Discoveries.'

would reflect their 'original meaning'. It does not involve a complete abandonment of rights. Its mission is to develop a rich repository of high-quality works in a variety of media, and to promote an ethos of sharing, public education, and creative interactivity.[31] It seeks to expand 'the range of creative work available for others to legally build upon and share'.[32] It aims at building an 'intellectual property conservancy',[33] which will serve to protect works of special public value from exclusionary private ownership and from obsolescence due to neglect or technological changes. It is believed that this would '…cultivate a commons in which people can feel free to reuse not only ideas, but also words, images, and music without asking permission, because permission has already been granted to everyone.'[34]

Creative Commons' ideology echoes a libertarian sentiment ('*What if we can take the law into our own hands? What if we can make our own rules?*'). It offers to let authors/owners govern the use of their own works. Authors/owners are presented with a wide range of options regarding the exploitation of their creative works: '*between full copyright — all rights reserved — and the public domain — no rights reserved. Our licenses help you keep your copyright while inviting certain uses of your work — a 'some rights reserved' copyright.*' While © stands for all rights reserved, like a stop sign which requires authorization for each and every use, (CC) stands for 'some rights reserved'[35] and automatically permits some uses.

The term *Creative Commons* communicates a powerful message. It celebrates the *commons* as a key for enhancing creativity. But what does this *commons* means?

Strictly defined, a *commons* is a legal regime in which 'multiple owners are each endowed with the privilege to use a given resource, and no one has the right to exclude another'.[36] Yet, the notion of the commons may refer to a wide range of situations.[37] The lack of a clear definition of the *commons* reflects a profound disagreement regarding the meaning of the public domain. Does a commons include works in which copyright has expired or only works which have ended their productive life?[38] Does it cover unprotected aspects of copyrighted works or also any type of

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31. *See* Creative Commons FAQ, *What is Creative Commons,* available at: <creativecommons.org/faq>.
32. *See* Wikipedia – The Free Encyclopedia, *Creative Commons*, available at: <en.wikipedia.org/wiki/Creative_commons>.
33. *See* Creative Commons, *Legal Concepts – Intellectual Property Conservancies*, available at <creativecommons.org/about/legal>.
34. *See* Creative Commons, *Legal Concepts – The Commons*, available at: <creativecommons.org/about/legal>.
35. *See* Creative Commons, *Get Creative Movie*, Learn more about Creative Commons, at <creativecommons.org/learnmore>.
36. M.A. Heller, 'The Tragedy of the Anticommons: Property in the Transition from Marx to Markets', 111 *Harv. L. Rev.* 621-688 (1998), at pp. 623-624.
37. P. Samuelson, 'Mapping the Digital Public Domain: Threats and Opportunities', 66 *L. & Contemp. Probs.* 147-171 (2003).
38. W.M. Landes and R.A. Posner, 'Indefinitely Renewable Copyright', 70 *U. Chi. L. Rev.* 471-518 (2003) (arguing that works fall into the public domain when they reach the end of their productive life).

exploitation of works, which falls outside the scope of copyright?[39] Is it *free* of any legal restraints[40] or simply accessible free of charge?[41] Creative Commons' slogans emphasize access ('*creativity always builds on the past*'),[42] but it remains unclear what kind of access to preexisting works is necessary to facilitate creativity? What would make a work accessible? Does it have to be free of any legal restraints? Is it enough that works would be widely disseminated? Could some restrictions apply and the work still be considered *free*?

The fuzziness of ideology and the broadly defined agenda would normally serve the purpose of social movements. It may help to expand pubic support and facilitate alliances among different social actors: NGOs (Non-Governmental Organizations) promoting a wide range of political agendas and corporate players motivated by self-interest. Yet, Creative Commons' ideology lacks a comprehensive vision of the information society and a clear definition of creativity and what makes it possible. While this could strengthen the effectiveness of social movements, which focus on protest and resistance, it could be detrimental for a proactive agenda.

3. EMPOWERING OWNERS TO GOVERN THEIR OWN WORKS

The strategy of Creative Commons for promoting the sharing and reuse of informational works makes an innovative use of traditional common law concepts: property and contracts. It is completely dependent upon a proprietary regime and drives its force from its existence. Asserting property rights in creative works has several advantages. It preserves the right of owners to exercise control over some uses of the work and collect royalties when they see appropriate. It leaves the door open for collaboration with market players as well as for some commercial uses.

Furthermore, claiming property rights may allow authors to safeguard their creative contributions against capture and abuse. Maintaining the enthusiasm and the sense of trust among potential contributors could be crucial for the success of Creative Commons. Social motivation is a major force that inspires thousands of volunteers around the world to contribute their talent and time to create free online informational tools (homepages, blogs, computer programs or reported news) in the absence of any direct monetary compensation.[43] The use of works for commercial

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39. J. Litman, 'The Pubic Domain', 39 *Emory L. J.* 965-1023 (1990).
40. Y. Benkler, 'Free as the Air to Common Use: First Amendment Constraints on the Enclosure of the Public Domain', 74 *N.Y.U L. Rev.* 354-445 (1999) 393.
41. Richard M. Stallman arguing that for creativity to flourish, software must be free of inappropriate and overly-broad legal constraints. '"Free software" is a matter of liberty, not price. To understand the concept, you should think of "free" as in "free speech," not as in "free beer." Free software is a matter of the users' freedom to run, copy, distribute, study, change, and improve the software.' *See* R.M. Stallman, *supra* note 23.
42. *See* Cone, *supra* note 3.
43. Few explanations were offered by the emerging literature to the high volume of information that is created by volunteers and is made available online free of charge. Yochai Benkler, 'Coase's

purposes, without rewarding the original author, may impair the willingness of individual authors to share their works.[44] Therefore, any attempt to create a commons would seek to prevent potential abuse by parties who did not contribute to the community effort and were taking advantage of efforts made by others.

Preventing capture by third parties is another concern. The fear is that market players would incorporate public domain materials into a proprietary artifact and make them available subject to restrictive terms. Subsequently, works which were made available under CC licenses would be locked under a restrictive licensing scheme. Preventing capture by commercial players is important not merely for securing continuous motivation of collaborating authors, but also to guard against fencing off the public domain.[45] The use of copyright to prevent capture relies heavily on the experience of free software. The GPL licensing scheme asserts copyright

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Penguin, or, Linux and the Nature of the Firm', 112 *Yale L.J.* 369 (2002). Some explanations stick to ordinary economic reasoning, arguing that even though there is no direct monetary reward in contributing to the Linux project or similar endeavors, there are side benefits. These include showing off or building a reputation, as well as learning and gaining experience that will later be valuable in the job market. *See* J. Lerner and J. Tirole, 'The Simple Economics of Open Source', *NBER Working Paper no. W7600*, Cambridge, National Bureau of Economic Research 2000, pp. 26-28. Others emphasize social motivations such as adhering to cultural norms connected to positive network externalities. This may be related to software, *See* S. Weber, *The Political Economy of Open Source Software*, University of California at Berkeley, E-conomy Project – Working Paper 15, at <e-conomy.berkeley.edu/publications/wp/wp140.pdf>, to hacker culture, E.S. Raymond, *The Cathedral and the Bazaar*, Cambridge (Mass.), O'Reilly, 1999, or to gaining status in a gift culture, K. Veltman, *On the Links between Open Source and Culture*, (2002), at <erste.oekonux-konferenz.de/dokumentation/texte/veltman.html>. Indeed, the online environment revives some old schemes of creating cultural objects of human workmanship, such as folklore dances, melodies, legends, and artifacts prior to the introduction of mass-produced culture. It spreads norms of collaborative research that were previously prevalent only in intimate academic settings to the general public.

44. The study of publishing agreements in nineteenth century England reinforces this observation. *See* D. Leenheer Zimmerman, 'Authorship Without Ownership: Reconsidering Incentives in a Digital Age', 52 *DePaul L. Rev.* 1121-1169 (2003), at pp. 1137-1143. Zimmerman suggests that authors were more concerned with unjust enrichment than with compensation. They were willing to transfer their rights for a pre-set price, as long as they did not feel cheated. Concerns regarding economic rights were raised when works turned out to be economically successful, and authors were distressed given the disparity between the price they were paid and the profits earned by publishers.

45. The content industry is likely to compete with Creative Commons and similar alternatives that are challenging its traditional business models. These business models, which are based on selling copies and fared use, are threatened not only by unauthorized copying and pirating but also by free content. J. Litman, 'Electronic Commerce and Free Speech', in N. Elkin-Koren and N. Weinstock Netanel (eds.), *The Commodification of Information*, The Hague, London, Boston, Kluwer Law International, 2002, p. 23. One cannot sell what others are giving for free, and to the extent that some content in the public domain substitutes proprietary content, there is certainly a competition between the two. Consider, for instance, the competition between Microsoft and Open Source software over government procurement around the world.

    Businesses are often motivated to fight against free content that is directly competing with their own works. A threat on the hegemony of the content industry might lead to litigation, in which the lack of copyright may become a serious disadvantage.

in the code, thereby allowing the licensors to stop others from capturing a source code and making it proprietary.

Reliance on copyrights may also carry, however, some serious disadvantages. Creative Commons' strategic choice to rely on copyright for promoting access to works may shape social practices related to information. Copyright may shape our attitudes towards creative works and creative processes and subsequently may affect our choices regarding rights and duties in informational works.

The notion of property is rather intuitive. When something is *owned* by someone else, we know we must ask for permission to use it. We normally do not think the same way of stories, images or music. Sometimes we might not even be aware that we were using them in creating our own work. When we use such creative works we usually do not have to cross any physical barriers. The barriers are abstract restrictions imposed by social norms. Social norms are therefore particularly significant with respect to informational works that lack physical boundaries. These norms turn songs and stories into commodities. The commodity metaphor creates an abstract 'fence' around (abstract) informational goods. While we may easily build a fence to keep others off our land, we cannot keep others from playing a musical composition hundreds of miles away. We must convince potential users that they should exercise self-restraint and respect the legal restrictions we placed on the use of our works. Achieving compliance with copyright laws by the general public therefore relies upon internalizing the commodity metaphor. When creative works are treated simply as commodities, we may assume that the basic property intuitions would apply to them.

Treating creative works as commodities protected by property rights strengthens the perception of informational works as commodities. Once we realize that everything we write, draw, or play could be licensed we may start conceiving our own self-expressions as commodities. Our email correspondence, a picture we took of a newsworthy event, and commentary we posted online, are all subject to exclusive rights. They all may be viewed as separate, identifiable pieces, which are subject to exclusion. We may think of our writings as economic assets, and view our own expression as chips to be traded, rather than ideas to be shared.

Reliance on property rights may weaken the dialogic virtue of information that is a key to individuals' participation in the creation of culture. The creation process is a complex social phenomenon with conflicting features. Works of art are autonomous, on the one hand, but communal on the other. Creating works at a specific time and place, and using existing artistic language and skills, are part of our social dialogue and the process of socialization. It reflects a shared artistic language, an artistic canon. It makes use of existing building blocks and state of the art technologies. When a work is created it becomes part of our cultural language. Communicating works contribute to their internalization by integrating them into our social code. Creative expression is shaped by the various audiences[46] and the

46. Creative expression receives its meaning through interaction with other social agents, and therefore, individual authors have no privileged status in determining its meaning. *See* R. Barthes, *The*

different generations of creators.[47] For creativity to thrive, creative works must be shared and individuals must be able to freely engage with them, to create new meanings. Those are the dialogic virtues of information. Engaging with creative works does not consume them. Exchanging ideas is not a transaction. The conceptual framework of *property* does not capture this complexity. Property rules do not merely define rights and duties. They further carry a normative message, announcing which values deserve protection and how. Therefore, reliance on property rights in creative works is likely to reinforce the belief that sharing these works is always prohibited unless authorized. To the extent this normative framework affects our behavior, it may distort our natural practices related to information.

Creative works are, indeed, copyrighted. Copyright law protects original works of authorship, and Creative Commons licensing scheme does not change this. However, it changes the pervasiveness of copyright. Licensing copyrighted materials used to be the domain of corporations. Individual creators were always the owners of their creative works, and works that were not intended for commercial use remained the sole property of the author even after they were made available to the public online. Many works were posted online without any restrictions, on the implicit presumption that re-use is permissible for non-commercial purposes. It was this thriving environment of information, produced and shared by peers that drove the Internet to its colossal success.[48] Individuals never bothered to assert their rights or engage in licensing. Licensing was either too complicated or too expensive. On the whole, individuals did not expect any revenues from sharing their creative works, and normally avoided the legal cost of licensing. By reducing the cost of licensing, Creative Commons makes licensing more accessible to individual users, thereby strengthening the hold of copyright in our everyday life. Now that individual authors are not only aware of the proprietary regime but are also armed with an efficient mechanism to execute their intellectual property rights, they may use it to set limits on the exploitation of their works.

How are people likely to use it? A few characteristics of the proprietary regime are likely to shape individuals' choices regarding their works. The continuous reliance on the proprietary regime may reinforce social practices that are associated with consumption and production of informational goods. The more we engage in securing a license to use the works of others, the stronger we may feel about licensing our own works. The creation process may increasingly resemble commercial production, seeking to minimize the cost of input and inevitably striving to increase the commercial value of the output. This commercial setting, constituted by the property system, makes it easier for industries to produce works and trade them in the marketplace. It seemingly empowers individuals with legal powers that were

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Death of the Author, in S. Heath (ed. and trans.), *Image-Music-Text*, New York, Hill and Wang, 1977, pp. 145-48.

47. N. Elias, *On Civilization, Power and Knowledge*, Chicago, University of Chicago Press, 1998. Artistic expression does not simply happen. It is the byproduct of existing culture and economic structures but at the same time, individual artistic impression shapes culture.

48. *See* J. Litman, 'Sharing and Stealing', 27 *Hastings Comm. & Ent. L.J.* 1-50 (2004).

once available only to industry. It makes copyright accessible to all. Yet, leveling rights in this way may put individuals at a disadvantage. *Copyright to all* may simply make property in information prevalent. Individual users, who never intended to make copyright their business, may find it difficult to compete with industries that specialize in commercializing copyrighted materials.

The metaphor of property is rather powerful. Intellectual property, however, is not merely a metaphor. It constitutes an effective legal mechanism that allows exclusion. The need to secure permission prior to the use of any creative work is the main barrier for sharing and collaborating among individual creators. It is the main cause of the transaction cost that Creative Commons seeks to reduce.

It remains to be seen whether individual authors, armed with user-friendly licensing schemes, will exercise their legal power with self-restraint, authorizing free access to their creative works. Letting authors govern their works will not necessarily promote public access to informational materials. Data collected so far on the actual use of the Creative Commons' licensing scheme suggests that over fifty percent of all licensors chose to use *Attribution-ShareAlike*, about sixty percent of which prohibited commercial use.[49] The most popular license among the many schemes facilitated by Creative Commons' platform is the *Attribution-NonCommercial-ShareAlike* license.[50] Under this license users are allowed to use the work for non-commercial purposes only, provided that they give appropriate credit to the original author and her work, and as long as any derivative work is subject to an identical license. Authors using this license opt to restrict the freedom of all subsequent creators to make any commercial use of their own derivate work, if it is based on, or incorporates, the licensed work. Almost a third of all authors using Creative Commons' license, the vast majority of whom license their works under *Attribution-NonCommercial-NonDerivative* license, chose to prohibit the preparation

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49. Twenty-three percent of all licenses version 2.0 and 2.5 are Attribution-ShareAlike and 33% are Attribution-NonCommercial-ShareAlike. *See* Initial data on Creative Commons' *license distribution*, Creative Commons' website, at <creativecommons.org/weblog/entry/5293>. The figures provided on Creative Commons' website are somewhat confusing. Information crucial for data analysis is missing, such as the methodology used for collecting the data, the date on which the survey was made, and the total size of the population queried. According to a Creative Commons official, the data is based on the number of search results using Yahoo! Search for link:{license url} queries. *See* Email from Mike Linksvayer, Creative Commons Official (July 1, 2005, 11:00:46) (on file with author). Using the same methodology on July 1, 2005, searching for versions 2.0 and 2.5 of Creative Commons' license, the total number of links was 12,725,340. The total figures provided by conducting these search queries are not stable, yet the general trends remain the same. This methodology suffers from serious deficiencies, as it includes all sorts of links to Creative Commons licenses, including links for the purpose of reference and discussion. The number of links may also include several links for the same work when a work is posted on different websites, duplicated links to different versions of the license, etc.

50. Thirty-three percent of all licenses are Attribution-NonCommercial-ShareAlike licenses. *See* Creative Commons' *license distribution*, *supra* note 49.

of any derivative work based on their work.[51] This license explicitly restricts reuse of works, and only permits use as-is.

When Creative Commons relies on property rights to advance its strategy, it reinforces the proprietary regime. Making copyright user-friendly is likely to bring more prevalence to property. This outcome, however, will not necessarily promote access to works. If the purpose of Creative Commons is to encourage sharing and collaboration in creative processes, it has to offer an alternative regime. Simply letting authors govern their own work may turn out to be self-defeating.

4. PRIVATE ORDERING AND PUBLIC WELFARE

Enforcement against third parties is central for the long-term goals of Creative Commons. To be effective, new social practices related to creative works must be widespread. Changing social norms requires a pervasive shift in the mindset of authors and users alike. The legal mechanism that seeks to establish rights against third parties is the 'Share Alike' provisions. The purpose of this provision is to guarantee that creators of any subsequent work that is based on the original licensed work would be subject to the same contractual terms.

A major challenge for Creative Commons is therefore to ensure that license provisions, and particularly Share Alike provisions, would be enforceable against third parties. The fact that licenses are enforceable against their immediate contracting parties is simply insufficient. That is because creative works tend to be used and reused over and over again, changing formats and being molded into new types of expressions. If subsequent users of the original work were not subject to the terms of the original license, the licensing scheme would become meaningless. Third parties, who gained access to the work without directly contracting with the rights holders, would be able to use the work against the will of the original owner. Consequently, an author who released her work for promoting the commons may find her work appropriated by third parties for commercial purposes. If a covenant against commercial use were unenforceable against third parties, a license to make non-commercial use would last no longer then a brief moment in the lifetime of a creative work. Shortly after the work is incorporated into a new derivative, the contribution of the original author could be freely commercialized. Putting ideology aside for a moment, many authors simply don't want to feel that they are being ripped off. If a work they released for non-commercial purposes is generating profits, they want a share. If licenses are held unenforceable against third parties, this could seriously undercut the motivation of authors to release works under more generous terms. Furthermore, if a license is not enforced against third parties, rights holders may have to contract with each subsequent user of their work. Users of derivative

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51. Attribution-NonCommercial-NoDeriv licenses were 28% of all licenses and Attribution-NoDeriv were 4% of all licenses version 2.0 and 2.5. *See* Creative Commons' *license* distribution, *supra* note 49.

works, which are based on several preexisting materials, would have to separately contract with each rights holder of each work included there under. This will not serve the ultimate goal of promoting sharing and reuse.

The enforceability of unilaterally-drafted restrictions against third parties may carry undesirable consequences.[52] Creative Commons' licenses, just like any other corporate licenses and DRMs, are standard contracts, which are drafted by intellectual property owners. Licenses have increasingly been employed in recent years for restricting (or prohibiting altogether) certain uses of the work that are otherwise permissible under copyright law, such as reverse engineering[53] or the redistribution of software.[54] Such restriction arguably limits copyright fair use or first sale privileges, or challenges free speech liberties. It imposes terms of license that prohibit reverse engineering of computer programs, or banning the resell of a copy of a creative work. One of the problems associated with a private ordering regime stems from the fact that those affected by the rights and duties are not represented in the transactions pertaining to their interests.

Licenses that govern the use of works affect third parties who did not take part in the initial bargain. Consequently, such licenses would often fail to reflect the public interest that in the case of information policy often goes beyond the immediate interests of any of the transacting parties. For instance, there may be good reasons to allow a public school teacher to use copyrighted materials in her class, regardless of whether the rights holder sought to license this use. We simply don't want to protect the owner's copyright to the extent that it limits the use by the public school teacher. We would like to enable teaching in public schools and learning by students, and we may wish to exempt such use notwithstanding any contractual restrictions. We are not only concerned with the high information cost imposed on the public school teacher when pursuing a license to use creative works for instruction in her class. We are no less concerned that she may subsequently not use relevant materials, since maximizing the use of creative works is the ultimate goal of copyright law. It is only for the purpose of ultimately benefiting the public that copyright protection is justified in the first place.

These considerations would make one generally more skeptical regarding the ability of markets to regulate the use of information and to produce (through contracts) efficient rules of use. Enforcing contracts that run with the asset submits decisions regarding the use of information to the market. Markets are incapable of making such choices – due to externalities. Externalities make private ordering regimes less attractive in the context of informational works. [55]

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52. N. Elkin-Koren, 'Copyrights in Cyberspace – Rights Without Law', 73 *Chi.-Kent L. Rev.* 1155-1201 (1998).
53. *See Bowers v. Baystate Technologies Inc*., 320 F. 3d 1317 (2003).
54. *See* for instance, MS/Adobe restrictions on redistribution, *Softman Products Company v. Adobe Systems Inc*., 171 F. Supp. 2d 1075 (C. D. Cal. 2001); *ProCD v. Zeidenberg*, 86 F. 3d 1447 (7th Cir. 1996).
55. T.W. Merrill and H.E. Smith, 'The Property / Contract Interface', 101 *Colum. L. Rev.* 773-852 (2001).

Enhancing the legal validity of private ordering could work both ways. It could certainly facilitate licensing platforms such as CC and GPL, but at the same time would also make restrictive terms enforceable.

5. PROLIFERATION OF LICENSES AND BARRIERS ON ACCESS

Creative Commons stands for open culture, but it lacks a comprehensive view of the necessary conditions that would make it happen. Avoiding commitment to a shared notion of freedom leaves the licensing platform with a single principle that is shared by all licensing schemes, that is letting authors govern their works. Authors are free to decide how their rights will be exercised. When the governing principle is authors' autonomy, the end result is a proliferation of licenses. Thus, the ideological fuzziness is translated into a large number of licensing schemes.

Creative Commons' strategy presupposes that minimizing external information costs is crucial for enhancing access to creative works. It seeks to reduce these costs by offering a licensing platform. Yet, the lack of standardization in the licenses supported by this licensing scheme, further increase the cost of determining the duties and privileges related to any specific work. This could further increase the chilling effect of copyrights.

A variety of licenses may negatively affect third parties, non-owners who are not looking for a license, but who simply seek to avoid inadvertent interference with copyright. The multiplicity of licenses may increase the cost of avoiding copyright infringement (external information cost).[56] If restrictions created by license are enforced against third parties, these parties must spend more time and incur additional costs of studying these restrictions in order to avoid potential violation. Such an inquiry may be required just to make sure that one does not inadvertently interfere with someone else's copyrights. After all, property rights would typically impose strict liability. Free customization of property forms through licenses that are enforceable against third parties is likely to create an information-cost externality by imposing information cost on an indefinite group of third parties.[57] Each new property form may subject third parties to novel duties, thereby dramatically increasing their avoidance costs. The more diversity of terms we allow, the higher the cost of avoidance third parties would have to bear. Avoiders must determine whether they invaded any rights of rights holders. If a work is copyrighted, the

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56. Property rules create two types of costs: costs incurred by transacting parties, i.e., right-holders and potential licensees, and costs incurred by third parties, i.e., non-owners who seek to avoid copyright infringement (external information cost). Clarisa Long identifies three types of information cost bearers: avoiders, builders, and transactors, each affected differently by information costs related to intellectual property rights. This typology of information cost is useful for understanding the broader context of intellectual property rights related to industrial production. *See* Long, *supra* note 5, pp. 491-492.

57. Merrill and Smith, *supra* note 55, p. 796.

symbol © would indicate that a license is necessary. A work marked by CC would indicate that some uses are authorized but others require a license. Each version of license may impose new duties, require new investigation and therefore is likely to increase information cost.

On this background Creative Commons' strategy is puzzling. On the one hand, advocating a variety of licensing schemes encourages authors to take advantage of contracts, announcing that the more options authors have to get their works out in the public sphere, the better.[58] Contracts allow fine-tuning of rights, tailored to address the particular needs of rights holders and users. Furthermore, not all copyrighted materials are alike. There is a wide variety of copyrightable subject matter, such as music, text, computer programs, scientific research, and films. Each is produced in a different creative process, generating a different creative culture, exploited and consumed differently, and governed by distinct business models involving different market players. The concerns of a documentary filmmaker could be remotely different then those of software designer or a law professor.

On the other hand, the licensing strategy does not facilitate a simple fixed license. Seeking to reduce the high information costs associated with the copyright system, Creative Commons' strategy offers to license works upfront. Yet, the variety of customized licenses is likely to increase information costs. For musical works, for instance, there is a whole range of licenses, including any combination of Creative Commons' standard license provisions: noncommercial, attribution, no derivative work and share alike. Alternatively, one can choose any of the following sampling licenses: Sampling (authorizing sampling for any purpose except advertising, but prohibiting any copying or distribution of the entire work); Sampling Plus (authorizing sampling for any purpose except advertising, and allowing copying and distribution of the entire work for non commercial purposes) Noncommercial sampling Plus (authorizing noncommercial use, and noncommercial copying and distribution of the entire work).[59]

The high information cost created by this licensing strategy is also related to the complexity of overlapping rights and new costs of coordination. There is already a large variety of licenses available to creators who wish to share their works on more

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58. *See* Creative Commons FAQ, *Is Creative Commons only about licenses?*, at <creativecommons.org/faq>. There seem to be, however, some tendency towards uniformity. The Electronic Frontier Foundation (EFF) recommended the Creative Commons' license over the EFF's Audio license, since they 'believe that consistency in licensing and the CC licenses' machine-readable code, will help both listeners and creators to find and combine works more easily.' *See* EFF, *Open Licenses*, at <www.eff.org/IP/Open_licenses/>. Also Creative Commons themselves recommend the use of the licenses of Free Software Foundation and the Open Source Initiative for software and software documentation. *See* Creative Commons FAQ, *Can I use a Creative Commons license for software?*, at <creativecommons.org/faq#faq_entry_3646>.
59. *See* Creative Commons, *Creative Commons – Choose Your Sampling License Options*, at <creativecommons.org/license/sampling>.

generous terms,[60] such as GPL,[61] CPDL,[62] GFDK,[63] OGL,[64] OOGL,[65] EABA,[66] or any type of combination offered by Creative Commons.[67]

The absence of standardization may lead to inconsistencies and incompatibility between different free-content contracts.[68] Consequently, creators who wish to share their works may not be able to use each other's content.

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60. Reichmann & Uhlir, for instance, propose to establish a zone of conditionally available scientific data in order to reconstruct and artificially preserve functional equivalents of a public domain. This strategy entails using property rights and contracts to reinforce the sharing norms of science in the nonprofit, trans-institutional dimension, without unduly disrupting the commercial interests of those entities that choose to operate in the private dimension. To this end, the universities and nonprofit research institutions that depend on the sharing ethos, together with the government science funding agencies, should consider stipulating in suitable 'treaties' and other contractual arrangements to ensure unimpeded access to commonly needed raw materials in a public or quasi-public space (J.H. Reichman and Paul F. Uhlir, *supra* note 8).
61. GPL license terms and conditions: <www.gnu.org/licenses/gpl.txt>.
62. 'Choral Public Domain Library' (CPDL) is an internet-based free sheet music website which specializes in choral music. Most of the scores are in the public domain, but some scores are newly composed. The CPDL Copyright is a type of open-source license, which allows the end-ser to use a score freely. The license provides that if any changes were made the subsequent version would still fall under the CPDL copyright. The license is based on the GNU GPL License that is very common in software development. For more information about CDPL, visit its website: <www.cpdl.org/wiki/index.php/Main_Page>.
63. GDFK – GeoFrame Developer's Kit – incorporates the programming API's of the Charisma DK and the IESX DK, so that a developer can integrate new material into all GeoFrame applications. *See* <www.oilfield.slb.com/media/services/software/support/gfdk/gfdk_intro_slides.pdf>.
64. OPL – The Online Gaming League is a gaming community web site maintained by a dedicated staff of volunteer gamers (<www.worldogl.com/main.php>).
65. OOGL – Object Oriented Graphics Library it is the library upon which Geomview is built (<www.geomview.org/docs/oogltour.html>).
66. EABA – 'Open Supplement License' in a Open Game License drafted by game designers who were not satisfied with the insufficient level of openness, in their opinion, of the OGL, and therefore drafted their own license (*see* wikipedia – The Free Encyclopedia, *Open Gaming*, at: <en.wikipedia.org/wiki/Open_gaming>).
67. For instance, while Creative Commons is promoting one set of licenses, the Free Software Foundation promotes the GNU General Public License (GPL) for software, and the so-called GNU Free Documentation License (GFDL) for documentation. Therefore, some content providers who wish to release their works under a less restrictive license may chose CC, others may be using GFDL. Creative Commons is offering the CC-GNU GPL, which adds the Creative Commons' metadata and Commons Deed to the Free Software Foundation's GNU General Public License. *See* Creative Commons, *Creative Commons GNU GPL*, at <creativecommons.org/license/cc-gpl>. Similarly, the CC-GNU LGPL, adds the Creative Commons' metadata and Commons Deed to the Free Software Foundation's GNU Lesser General Public License.
68. The Open Source Imitative created a set of guidelines for a license to be considered Open Source. <www.opensource.org/docs/definition_plain.html>.

6. CONCLUSION

The colossal success of the Open Source movement provides the proof of a working system that is based on a licensing platform. Could this success be duplicated by Creative Commons and applied to new types of informational works? The Open Source/Free Software movement addressed a relatively homogenous group of elite programmers, who share a set of well-established social norms. This substantially reduced the need for legal enforcement. Furthermore, open source projects are collaborative concrete efforts. This creates a sense of community that not only motivates contribution to the communal effort, but also reduces attempts of abuse (such as vandalism and intentional errors) and encourages collaboration in enforcement efforts (reporting infringements of the GPL). Enforcement of GPL, if it ever becomes necessary, would address a relatively small group of infringers.[69]

Creative Commons is far more ambitious. It seeks to address the needs of a diverse group of users, exploiters, and creators of very different backgrounds (musicians, filmmakers, photographers, and writers), and many countries (iCommons).[70] Its agenda covers a wide range of interests and needs of rights holders of various kinds.

Many questions arise: To what extent the licensing strategy could work in the absence of social cohesion? What are the prospects of subverting copyright by a strategy that tolerates diversity and difference? Is it likely to have a positive effect on the creation process? Possibly not. It may actually strengthen the rights discourse and the hold of property as a conceptual framework and regulatory scheme for creative works.

The most striking difference, however, between the Free Software movement and Creative Commons seems to be strategic: The GPL created a standard for licensing free software while Creative Commons facilitated the proliferation of different licenses. Yet, these different strategies reflect a fundamental difference in ideology. The GPL's provisions reflect a shared definition of free software that was intensively negotiated by the community.[71] Creative Commons still lacks such a consensus. The analysis suggests that creating an alternative for copyright © may require a shared sense of what freedom of information means. It is unnecessary to reach consensus regarding the precise definition of freedom. It is necessary, however, to agree upon the set of necessary conditions for a work to be considered 'free' and for a license to be counted as promoting freedom.

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69. Most people lack the necessary skills to incorporate open source programs into commercial products, and hackers would be subject to social sanctions. Enforcement efforts are therefore likely to target commercial companies that are relatively easy to identify and monitor. In other types of content the ability and temptation to infringe the license seems higher.
70. iCommons is 'the International Commons – an offshoot of our licensing project dedicated to the drafting and eventual adoption of jurisdiction-specific licenses'. *See* Creative Commons, *Creative Commons Worldwide*, at <creativecommons.org/worldwide/>.
71. The introduction of GPL version 3 was accompanied by similar negotiations. *See* Ingrid Marso, *GPL 3 not expected to split free-software world*, Cnet News.com (March 25, 2005), at <news.com.com/GPL+3+not+expected+to+split+free-software+world/2100-7344_3-5637496.html>.

The lack of a clear alternative may simply strengthen the proprietary regime in creative works. At the ideological level this would involve relaxing the libertarian sentiment of letting owners rule their property. It would further require some effort to define and agree upon the necessary preconditions of free access. Creative Commons would have to trade the sovereignty of owners for the reduction of transaction cost that would enhance access. At the practical level it would require drafting a license that would include a set of predictable authorizations.

It may well be that there is nothing wrong with copyright per se, but only with the way these rights were exploited by copyright owners in recent years. Changing social practices may have a powerful signaling effect, the importance of which should not be overstated. Yet, establishing a workable and sustainable alternative to the current copyright regime would require enforceable legal measures that would restrain the power of copyright owners to govern their works. To achieve this goal it would not be sufficient to facilitate self-restraint and encourage copyright owners to treat their copyright as guardians, protecting it from any attempt to restrict access and reuse. In the long run, creating an alternative to copyright would require a copyright reform.

Workshop Discussions

Roy Melzer and Lucie Guibault

INTRODUCTION

Two workshops, sponsored by the Dutch program on Information, Technology, and the Law (ITeR), were held in a joint location in Amsterdam on 1 and 2 July 2004. These two workshops dealt with related issues, the first one entitled 'Code as Code', which will result in a separate publication; and a second one, on the 'Commodification of Information: the Future of the Public Domain', which gave rise to this book. Both workshops were launched by a general introduction by Bernt Hugenholtz, followed by a plenary session where Joel Reidenberg and Pamela Samuelson were invited to give a keynote speech. After this joint opening session, the two workshops continued their discussions separately. The Commodification of Information workshop was divided into six sessions, covering the general themes addressed by the working papers. A major part of the workshop was reserved for discussion. Each session began with a short presentation by each author of the essence of his or her paper, followed by an in-depth discussion. Bernt Hugenholtz moderated all sessions.

The first session concentrated on Eli Salzberger's paper 'Economic Analysis of the Public Domain' upon which Rochelle Cooper Dreyfuss was invited to react. Participants debated on the importance, scope, and compatibility of the economic analysis with intellectual property. Related topics as governmental funding, depiction of the creation process and economic incentives were mentioned as well. The second session dealt with the fundamental rights aspects of the commodification of information with Michael Birnhack's working paper entitled 'More or Better? The Government in the Copyrighted Marketplace of Ideas', and on Julie Cohen's comment on it. A large part of the discussion focused on the freedom of speech as a measure to evaluate the public domain and on current concepts put forward in the US and in the EU in regard to it. The place of deontological theories in analysing the

L. Guibault and P.B. Hugenholtz (eds), *The Future of the Public Domain*, 347–372

public domain and the current definition of 'quality' and 'quantity' of the domain from a historical perspective were debated as well.

The third session focused on Lucie Guibault's paper 'Wrapping Information in Contract: How Does it Affect The Public Domain?' and on Kamiel Koelman's paper 'The Public Domain Commodified: Technological Measures and Productive Information Usage'. A major part of the discussion addressed the implications of the use of contracts and technological measures on the accessibility of the public domain. Aspects of technology and contracts in relation to the database directive were discussed as well.

The fourth session concentrated on the commodification of information through the expansion of intellectual property rights, such as database rights, patents, and copyrights. The session started with Julie Cohen's paper on 'Copyright, Commodification, and Culture: Locating the Public Domain'. The discussion examined the normative and positive aspects of the public domain, and considered the creation process as well as the question of who is an artist and what are the incentives to create. Mark Davison's paper on 'Database Protection: The Commodification of Information' gave strong criticism on the database directive. A comparison between the different database protection models that prevail in Europe and the US also provided room for debate. This session ended with Rochelle Cooper Dreyfuss' and Graeme Dinwoodie's paper entitled 'Protecting the Public Domain of Science'. This paper tested various approaches to protecting the public domain of science to see whether they are consistent with obligations under international law. It ended with a suggestion for adding substantive maxima to the minimum requirements now found in the TRIPS Agreement.

The fifth session examined the question of the commodification of different types of public or private information outside of intellectual property law, such as traditional knowledge and culture, and government information.[1] Leanne Wiseman's and Brad Sherman's paper entitled 'Toward an indigenous public domain?' addressed the difficulties in balancing the interests of the general public with those of indigenous cultures. The unsatisfactory current attempts to cope with the problem were debated as well. The discussion on Mireille van Eechoud's paper on 'The commercialization of the public sector information' mainly concerned the similarities and differences to be drawn between the European regulatory framework on this subject and the American 'Bayh-Dole Act', with a particular attention to the solution of the exclusive licensing of public sector information. The public and competition law aspects of the creation of governmental information also came to the forefront of the discussion.

The last session concentrated on possible alternatives to the commodification of information, and more specifically on Maurice Schellekens' paper on 'Free and open source software: the answer to commodification?' and on Niva Elkin-Koren's

1. The paper written by Corien Prins, 'Property and Privacy: European Perspectives and the Commodification of our Identity' (*see* p. 223 in this volume) was not discussed during the workshop because the author was unable to attend.

paper on 'Creative Commons: a private Ordering Remedy to the failure of Copyright Law'. The greater part of the debate centered on the use of technological protection measures and on the impediments put in the United States by the Digital Millennium Copyright Act (DMCA) on the development and distribution of open source software. The discussion followed with an inquiry into the objectives followed by the Creative Commons' model. Potential excessive licensing and over-commodification as a by-product of the model's implementation were debated as well.

Finally, Bernt Hugenholtz summarized these two days of intense, highly intriguing debates and emphasized that there is a lot of work to be done, especially in Europe on the theoretical, practical, conceptual, and political levels.

DAY I

PLENARY SESSION

Software Equality and The Law
Joel Reidenberg

Reidenberg started his presentation with a few general reflections about the papers for the 'code as code' session. Reidenberg emphasised that these papers show a deep scepticism in regard to the notion of technology as a legitimate means of rule-making, more specifically of 'code' as a substitute for law. Reidenberg also stressed that the papers distinguish three important characteristics: the policy process, the policy choice – or substantive rule – and the implementation. According to Reidenberg, the scepticism of the papers focuses on the first two of these characteristics rather than the efficiency of technology in implementing a policy rule. Reidenberg stated next that he shares this scepticism. According to Reidenberg: 'Lex informatica is inherently unfair and the State has to intervene'. This provocative statement led him to make several observations. First, one needs to identify the origins technological rule-making and technology's rule setting function. Second, the technological rules themselves have become a battleground for political control. The Commodification papers by contrast, focus more on the policy choice issues. Who is participating in this process? Significant criticism about this process is whether it is fair, transparent, and legitimate.

Third, public law seems to be privatised through technical rule-making. For Reidenberg, this meant that decisions concerning public choice are made by private actors, even in areas where one might think that it should better be done by the public sector. Fourth, these observations are only of importance to the extent that unfairness comes as a result. Fifth, we witness the resurrection of the law, i.e. the 'comeback of the State'. Reidenberg noted that there are going to be more and more technology-focused laws imposing additional responsibilities on intermediary actors. The State is making a comeback and uses private actors to assist in law enforcement.

Reidenberg concluded his presentation by pointing out several challenges. First, if important public decisions are made in the private sector and if the State

is making a comeback, how might the State create a democratic legitimacy in the technological rulemaking? Second, is there sufficient legitimacy? Third, where are we likely to see State ratification efforts? Fourth, should architecture replace law and how can it do so legitimately?

Salzberger referred to the second challenge and stressed that one needs to define the concepts of democracy and its legitimacy before one can argue that rules made by private actors using technology are not democratic or less democratic than rules, which are the result of a different procedure. In Salzberger's opinion, making rules by technology is less subject to market failure than the rent seeking exercise of public choice rulemaking.

Reidenberg believed that a set of constitutional checks and balances is absent in the case of democratic rulemaking outside a legal system in, for example, an online community.

Verhulst remarked that there would be a legitimacy problem if there were no choice and that there is a trade-off between legitimacy and efficiency.

Reidenberg agreed with this last point and observed that the question is who will decide what the levels should be. Reidenberg stressed that in a democracy this should be decided by political institutions.

Verhulst pointed out that it is difficult to know in advance which code will become the default code.

Complexities of Mapping the Public Domain
Pamela Samuelson

Grassmuck first wished to know if Samuelson argues that the public domain cannot be regulated and second, emphasized that today the prevailing discussion centers on the phenomenon of the 'commons' and not on the public domain.

Samuelson replied that the public domain, to some extent, could be preserved through regulation. Regulation already exists at the international level, through the WIPO Copyright Treaty and the TRIPS Agreements. At the national level, section 102 of the US Copyright Act gives a good example of regulation, since it defines elements that cannot be copyrightable and therefore creates boundaries to the scope of the intellectual property. This can be interpreted as a statutory recognition of the public domain. More legislation that would preserve the public domain is not a bad idea.

In regard to the 'commons', Samuelson emphasized that the switch from the notion of 'public domain' to that of 'commons' was mainly motivated by political reasons. The term 'public domain' was understood as quagmire of items 'undeserving protection' unlike the term 'commons' that represents normative values of community and possesses a more positive connotation. Legally, what is so interesting about the distinction is that much of what is called the commons is actually common property right, but one that is protected through a sort of limited common property right that essentially preserves the thing as a commons. In other words, it is the use of intellectual property in some sense as a means to protect oneself against intellectual property.

For **Elkin-Koren**, there was a very interesting link between Samuelson's and Reidenberg's papers. Public law and technology are called upon to change the current regime in legitimate ways. Elkin-Koren believed that Samuelson's descriptive analysis could benefit from a more normative analysis of the public domain. Maybe we should ask ourselves whether we should commodify information rather than asking what belongs to the public domain? Do we have to commodify?

Dommering pointed out that the map is very intellectual property oriented. The map probably does not represent the point of view of the organizations that control the access to the public domain.

Additionally, Dommering also wanted to emphasize that the State's unique position allows it to enrich the public domain and to hold the access to unique information sources. The State also creates exclusive rights to access and produce information. Dommering observed that the information produced or funded by the government as a very important part of the public domain. Dommering did not see this part demonstrated in the map.

Samuelson agreed that the map fails to refer to governmental information, though the public domain map does refer to 'classified information', a type of information that is created by the government. Indeed, Section 105 of the US Copyright Act attributes this kind of information to the public domain, but the confidentiality of the information makes it inaccessible. Basically, the map reflects only the writer's experiences and will be revised in future versions. How would you depict this governmental share in the public domain?

Dommering replied that the only possibility to get access to governmental information resources is through exclusive contract or assignment of exclusive rights, which can be granted to parties in the society. The government creates an exclusive right to access the public domain. Dommering enquired whether a governmental policy regarding the public domain should be developed.

According to **Kahle**, maintaining the public domain resembles maintaining the public sphere. Until the late sixties, the Bureau of Land Management handled with land that no one was ready to pay for, lands that were considered as a burden. However, after the consolidation of the National Park Service, the status of those pieces of land was changed, because the service glorified the parks and emphasized their importance. Is there a room to establish the Yosemite Park of information in Europe? Can it help to enable public access to the domain?

Samuelson noted that the motive to write an article on mapping the public domain, which was called 'threats and opportunities to the public domain', was to say 'lets not just focus on the threats but also on the solutions'.

Hugenholtz referred to Kahle's question and argued that in regard to Europe, holding this conference is a good sign. Public domain has not been substantially on the map in Europe, but it is coming. There are also practical initiatives on this subject, like the last Creative Commons conference.

Grassmuck enquired whether if there is an access right to essential information and knowledge. Consumers are eager for more access. Grassmuck also asked what would be the right strategy to enable access to the public.

Samuelson replied that mapping the public domain is one of the several strategies to open up the dialogue on the subject matter and to shed some light on what we, as a society, want to preserve.

SESSION I

Economic Analysis of the Public Domain
Eli M. Salzberger

Dreyfuss' comments on Salzberger's paper

Dreyfuss stressed that Salzberger provides a valuable overview of the leading theories, shaping the understanding of intellectual property rights. It is hard to disagree with his learned account.

Dreyfuss followed Salzberger methodology and focused on some hidden assumptions and underemphasized issues in the paper:

1. Dreyfuss referred to the justifications for protecting for the public domain. In parts of the discussion, the public domain is taken as an end in itself. Dreyfuss quoted Salzberger's argument that a public domain is needed because it enables individuals to meet each other, to interact, to exchange views and information and to influence each other's opinions.

This argument does not get very far, because there is no real stopping point, no methods for weighing claims to interact against, say, moral claims to the fruits of one's labor, or demand for economic incentives and protection from free riders.

Dreyfuss suggested that Salzberger might consider the public domain instrumentally, arguing that its justification comes from the cumulative nature of information production. Progress requires involvement with what is already known.

In that guise, the justification has a rhetorical force, it provides a way to measure countervailing considerations and to cabin claims for ever-stronger protection.

Dreyfuss referred to Salzberger's paper regarding Thomas Kuhn's work. Dreyfuss believed that Salzberger, based on Kuhn's theories, thinks that science might progress faster if older works were not freely available because then scientists would have no reason to hang on old theories and would have to conceive new ones. Dreyfuss believed that the view of Kuhn is error. To say that science progresses discontinuously through paradigm shifts does not deny the need for access to the domain of what is known. Paradigm shift occurs, in Kuhn's theory, because new phenomena can be observed, which known theories cannot fully explain, so the theories are stretched and stretched until they collapse under the weight of the accumulated new knowledge. If newly discovered facts could not be accumulated and could not be measured against the old theories, then there would be no collapse, no new paradigms to replace the old ones.

To put it another way, Einstein didn't discover the theory of relativity *despite* Newton's laws, he discovered it *because of* Newton – because he and others had made observations that couldn't be fully accommodated by Newtonian mechanics.

For Dreyfuss, this instrumental view of the public domain is the key to the controversy because it alleviates Salzberger's pessimism concerning the direction in which intellectual property law is moving as a matter of public choice theory.

That is, Salzberger seems to think that because the public is less well organized than intellectual property rights holders, legislatures will always be biased in favor of increasing incentives – which is to say, in favor of increasing intellectual property protection.

However, if the public domain is appreciated as the source from which new technology springs, then it can be expected that those in the business of generating new knowledge know that their incentives arguments have limits – that too much protection will kill the goose that lays the golden eggs.

As a descriptive matter, this is certainly true. We are in a century of increasing intellectual property rights. But in fact the pendulum swings both ways. Throughout history, high protection periods were followed by periods of lowered protection. In the US for example, conflicting colonial patent rights created transactional problems, which led directly to the vesting of power over patents in federal hands. The idea was to contain the states – to limit patent rights – and not to make them stronger.

Admittedly, at the end of the 19th and beginning of the 20th centuries, the given protection increased. A series of Supreme Court cases and Justice Department interventions cut intellectual property back sharply. Recent legislation like the DMCA, dilution law, and Sony Bono Term Act make it clear that we are now in a major expansion phase of the protection. However, if one takes a closer look at what the Supreme Court has been doing, the beginning of a pull back can be discerned:

- In the *Feist*[2] and *TrafFix Marketing Displays*[3] cases, the courts limited the objects of intellectual property protection, lending doubt to whether protection over new matter will survive judicial scrutiny.
- In the *Dastar*[4] case, the court refused to allow trademark right to effectively extend an expired copyright.
- In the *Victoria's Secret*[5] case, the court interpreted the dilution law as restrictively as possible.

The same notion is also shared among lobbyists. In reaction to the current Federal Circuit notion to reduce existing experimental use defence, the American Intellectual Property Lawyers Association (AIPLA) is now advocating a statutory defence, at least as broad as the one the Federal Circuit rejected. Lawyers know that developers need to experiment.

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2. *Feist Publications, Inc. v. Rural Telephone Service Company Inc.*, 499 U.S. 340 (1991).
3. *TrafFix Devices, Inc. v. Marketing Displays, Inc.*, 532 U.S. 23 (2001).
4. *Dastar Corp. v. Twentieth Century Fox Film Corp.*, 539 U.S. 23 (2003).
5. *Moseley v. Victoria's Secret Catalogue, Inc.*, 537 U.S. 418 (2003).

Dreyfuss referred to Salzberger's paper regarding Richard Posner's and Bill Landes' model. These scholars think that greater incentives are needed to encourage re-use of old works, and therefore advocate unlimited renewal of copyright. Dreyfuss noted that when their proposal was presented to the Copyright Society in New York, not even the practitioners assembled appeared to support it. In addition, Dreyfuss suggested that there is a natural limit to the incentive argument and therefore not much to worry about intellectual property rights in the long term.

2. For Dreyfuss, the difficulties in transaction around patent rights are underestimated. The Internet makes the right holder identification easier and their usage term's transparent (creative commons project for example). However, that may be sufficient for copyright, but in regard to science, Dreyfuss believed that there are differences that haven't been considered:

- One difference is the identity of the infringer. While an independent creator does not infringe copyright, independent inventors infringe patents. The limitation of copyright sets an upper limit on what rights holder can charge while there is not upper bound to limit pricing in regard to patent.
- Standardized material transfer agreements share some of the off-the-shelf qualities of the Creative Commons. However, they have not worked well. Rebecca Eisenberg has theorized that they would not in situations in which the potential value of the use mode of the patented material is extremely unclear and where the parties have very different goals.
- In the copyright realm, works do not tend to supersede each other. But cannibalisation of the markets is common in the technical fields, making for more refusals to license.

For Dreyfuss, part of the Creative Commons model is to impose a copyleft-like regime on scientific data. Dreyfuss is worried about this development, because it produces another kind of transaction cost, that of tracing the work back to its origins. These tracing costs are potentially huge.

3. Dreyfuss referred to Salzberger's argument that territoriality is no longer significant because 'ideas cross geographical and political boundaries.' Dreyfuss was not convinced that the law on the access to the fruits of those ideas should also cross-geographical boundaries. Dreyfuss argues that in different communities, creative enterprises are organized differently. Ideas of sharing, doing business and taking technical risks differ from one society to another. Therefore, different societies adopt different laws. For example, in the pharmaceuticals arena, developed countries' citizens are able and ready to pay for geriatric medicines and ready to pay more for research on this subject matter. However, some developing countries cannot pay either for the medicines or for the research. Dreyfuss believed developing countries should not be required to adopt the same patent system as developed countries. Further, they should be allowed to free ride on the developed countries' willingness to invest. Territorial laws and rules against parallel importation are what would make

a system like that possible. Of course, poverty and wealth do not perfectly track the same political lines. However, this is not a problem unique to intellectual property law. So long as we use the imperfect categories of nation states in regard to other respects, we are at peril to ignore them for intellectual property.

Discussion

Salzberger emphasized that he does not know yet what is the exact solution and how he will be able to combine Rochelle's notes in his article but it is very helpful.

Sherman pointed out that the economic analysis could contribute to public domain idea, however it would not be easy. There are differences between the economic analysis and the public domain concept, partly because they aim to achieve different goals. The same problems also arise between some political concepts and the public domain concept.

Salzberger stressed that the economic analysis is not standing against the public domain and might even contribute to public domain expansion. The public domain resembles to the public sphere and should be connected to public land theories.

Additionally, the commodification is not standing against the public domain since not all of the raw materials which could be commodified are part of the public domain and therefore the conflict is not an inherent part of the process. It is not a zero sum game.

Koelman referred to the mapping of the public domain and enquired, from the economic analysis point of view, what should be part of the public domain and should not?

Salzberger replied that there is no explicit answer. However, two points ought to be made: First, when the concept of property rights stand at the base of the answer, several factors should be considered, among them the transaction cost factor. This factor has changed dramatically because of technology progress, and therefore the outcome of the economic analysis in relation to the old analysis has changed substantially. Second, from the economic perspective, intellectual property is not an antithesis of the public domain. Therefore, fixing borders between intellectual property and the public domain is not the right outcome.

Van Eechoud referred to governmental funding, and enquired if the economic analysis excludes the governmentally sponsored research from copyright protection.

In addition Van Eechoud enquired what is the economic analysis outcome regarding public access to governmentally sponsored research data.

Salzberger responded that, from an economic perspective, market failures could be remanded by different means that are substitutes to one another. Direct governmental funding is a substitute to intellectual property as it provides incentives to create, and therefore, the output ought to be in the public domain.

Dreyfuss stressed that the economic analysis of patent and copyright are different. Patents give an incentive to come up with different products, while copyright promotes different ideas and initiatives. Dreyfuss referred to Van Eechoud's question

and replied that with respect to copyrightable publicly funded data, it seems that it should be in the public domain.

In **Elkin-Koren's** opinion, scholars should be cautious when using the economic analysis to explain the public domain from the perspective of market failure. The economic analysis emphasizes that without economic incentives no one will invest time or money in the public domain. Elkin-Koren is concerned that this is not an accurate depiction of the public domain because society also values things that cannot be sold. The values that societies trust are exchanging and sharing knowledge, rather then buying and selling it.

Cohen agreed with Elkin-Koren and stressed that the economic analysis is not doing it well, also in trying to depict in positive manner how people create. The economic analysis is coming from a different normative place. What motivates people to invent and to create cannot be measured by it. The economic analysis can depict some models like the tragedy of the commons since people behave as free riders, however for some other models, like creation, this analysis is not suitable. In Einstein's case, for example, the creation was more an outcome of knowledge and paradigm shift combination then an incentive based creation.

Salzberger disagreed and argued that economic analysis is suitable. However, one can take the economic analysis to different paths. In America, for example, the most important universities are private while in Europe most of them are public. The determination of intellectual property boundaries by privatising the university system first or by investing money in public universities can drive us to different places.

For **Samuelson**, the economic model is a useful tool in the analysis, but not the core of it. Reverse engineering, for example, is done mostly because of curiosity and not because of commercial considerations, which the economic discourse cannot take into account. However, the model contributes to the analysis of computer science research and to the reasoning process behind the adoption of the database protection.

SESSION II

Fundamental Rights Aspects of Commodification
Michael Birnhack

Cohen's comments on Birnhack's paper

Referring to Birnhack's paper, Cohen wanted to make a parallel between the free speech theory and the market place theory and also between the major current of opinions of copyright theory and the major current of opinions of free speech theory.

Cohen divided her survey into three major topics:

1. Cohen wondered why Birnhack was not referring to the deontological theories in his paper. Cohen believed that if Birnhack wanted to make a point about people's views on the relationship between quantity, policy and the public domain then the paper must include the universe of copyright and free speech. Including deontological theories would have an positive effect on the analysis.
2. According to Cohen, mapping the public domain in terms of quality and quantity is a good idea. However, different persons and scholars have different views on the public domain and its values. Therefore, if Birnhack wanted to describe how the mapping of the public domain works, it is fine, but if he aimed at finding what is the best view on the public domain, Cohen was not sure if we would be there yet. Cohen enquired how Birnhack planned to answer the question of how people should think about the public domain using the quality and quantity mapping. Cohen agreed with the convergence of the public domain and the public sphere, but emphasized that it would be useful to know why the focus should be on this aspect of the problem because the answer would enlighten the way we should think about the public domain.
3. Cohen recalled that the title of the session was fundamental rights. Cohen stressed that the paper only referred to free speech. Other fundamental rights like privacy, the accessibility of creative material and the appreciation of the creative process should still be referred to. Additionally, Cohen put forward some open questions like: can 'quality of speech' or 'freedom to inquire' be referred to as a fundamental right? And should the concept of public domain be constitutionalized?

Cohen summarized her thoughts by pointing out that if Birnhack wanted his paper to be about freedom of speech it would be sufficient. However for a more extensive debate, one should refer to the dynamic between public domain and public sphere and to various fundamental rights.

Discussion

Birnhack responded that with respect to deontological theories, when the focus is on the individual speaker or on the author, the survey of copyright is taken from a deontological point of view. In those cases different measures of quality and quantity exist, because what is important from those point of view is that the individual is able to speak. The center is the quality and quantity of speech of one speaker. The public may benefit indirectly from having happy people around, because the authors created their own unique identity and therefore feel happy for fulfilling themselves, but this is not a direct factor. Birnhack indicated that those theories are taken from a different point of view and that is why they were put aside in the consolidation of the paper. However, Birnhack will reconsider the subject matter. Additionally, with respect to quality and quantity measures, Birnhack argued that the source of the threat to the freedom of speech matters less than the threat itself.

The move from quality and quantity mapping to a normative point of view is done in other unpublished article. However, to some extent, it is a waste of time, because normative and positive analyses are based on different assumptions, mostly contradicting assumptions with different political morality.

According to **Hugenholtz**, the EU and the US point of view differ as a result of various ideologies. It is intriguing to see that though copyright protection is based in Europe on old concepts of natural justice, where utilitarianism is not at the root of the protection like in the US, courts in Europe are, to a much larger extent than in the US, prepared to curtail copyright claims and to trump copyright by free speech principles.

In addition, Hugenholtz referred to the paper's argument according to which copyright and free speech pursue the same goal and stressed that it might be dangerous, because it creates immunity to the freedom of speech test, resembling the US case law. How can copyright counteract free speech if they pursue the same goal?

Birnhack referred to the extension he made before. Either in Europe or in the US, the argument was that, during the legislative process leading to the adoption of the copyright act, the free speech component has been taken into account. Recent current of opinions, in both side of the ocean, indicate a process of internalisation. According to Birnhack, from the mechanical point of view, we can argue that the legislator already considered those issues during the legislative process. European copyright law is indeed not confined to the 'progress of science' notion of utilitarianism, and therefore, can be understood in a deontological way. Copyright is not a means it is an end. Hence, an external conflict with the concept of copyright has been created, leading to the internalisation of free speech into copyright through mechanical means, like the fair use doctrine. Real substance was injected into the theories based on fundamental rights. In opposition to this, the US refers to the fair use doctrine as a response to the inability of users to negotiate with the copyright owner market failure.

For **Burkert**, the quality and quantity problem was more an issue of media regulation then copyright protection. In regard to quality, Burkert argued that the law always had the problem to assess it and this is just another caveat. A more essential problem is Hugenholtz's way of thinking. The difference between American and European approaches is in terminology. The US approach uses geographical terms as boundaries, where the European approach, Germany for example, uses terms of physics, as forces interplay with each other. Burkert emphasized that while in the US geographic model, the public domain and copyright can sometimes co-exist, in the EU physics model everything can co-exist at the same time.

Referring to the notions of quality and quantity, **Sherman** agreed that the terms might help to create and define the desirable public domain. However, Sherman believed that Birnhack's definition of the public domain had a primary goal, one where the public domain should function as an instrument to achieve social values. For Sherman, one could look at the public domain as something that contributes to several social values like cultural enhancement and accessibility of information. Defining those values using the quality and quantity terms might help to decide how the public domain should look like.

Dinwoodie pointed out that from a historical point of view, quality and quantity have been used as very important concepts in the development of rights since the 18th century. First, it was the quality of the labor that was used to measure, *inter alia*, the difference between the labor invested in creating a watch or in writing a book, a measurement that helped to differentiate between the copyright and the patent duration of protection.

Afterwards, in the 19th century, it was the quantity of the labor. During these years, the debate moved from the quality and quantity of the creation to the quality and quantity of the products themselves. Dinwoodie enquired which notion of quality and quantity was at the center of Birnhack's paper.

Elkin-Koren relied on Birnhack's paper and on the case law of recent years to argue that the neo-liberal free speech point of view is not promoting the discussion on the conflict between copyright and public domain. For Elkin-Koren, Birnhack's paper constitutes a proposal to insert the freedom of speech into the copyright discourse by introducing a quality measure. The proposal assumes that one of the reasons for granting copyright protection is to develop the public domain. Another assumption is that promoting the development of the public domain is done by introducing a quality measure, which is determined by who the producer of the knowledge is, presuming that the identity of the creator affects the content. This freedom of speech notion emphasizes the need for non-cooperation contents. Measuring the public domain by the scope of participation institutes a normative criterion.

The current copyright regime promotes only one type of content creators while the public domain promotes the others.

Hugenholtz enquired what the meaning of 'quality' in the paper is, and whether the implementation of this element into the law would bring a new meaning to the originality criterion in copyright?

In **Birnhack's** opinion, both quality and quantity are fuzzy terms. Birnhack accepted Dinwoodie historical survey and regarded it as another example that emphasizes the difficulties in measuring those terms. Birnhack indicated that the society would rather have more and better free speech, however that seems to be impossible. The best test case is that of speech repetition, where the speech of the second speaker is of little or no 'quality' because the speech has already been expressed. However, from the democratic point of view, the fact that another person speaks is contributory. How do we choose one political idea from another? From the horizontal level, there is a conflict. Another example can be found when comparing foreign case law. Contrary to the European Convention on Human Rights (ECHR), there is in American constitutional law no built-in system for weighing conflicting fundamental rights against each other. Superimposing layers of quality and quantity of speaker and content might improve the assessment measures.

Hugenholtz criticized the quality measure. Trying to fit quality measures into the copyright regime is the first step in the interment of the originality criterion. The European approach is not so bad. There are quality standards. Theoretically, quality is built into the system.

Samuelson stressed that another danger to the public domain is the destructive force of technology. The World Wide Web contributed to the public domain

substantially by enabling everyone to access knowledge and to participate in the public discussion. On the other hand, technology can be used to prevent access to the public domain. The *Eldred* case and *Intel* brief are worth mentioning in this respect.

Koelman stressed that if he understood Birnhack correctly the quality is not of the information, *per se,* but the quality of the political discourse. Koelman was troubled that the political discourse might become dangerous as a criterion, because better political discourse assumes greater truth and greater truth assumes more information, a circular argument that might create less qualitative discussion.

SESSION III

Contracts and Technological Measures
Lucie Guibault and Kamiel Koelman

Guibault believed that introducing new legislative provisions into copyright law, which would prohibit any restriction in a contract regarding the use of non-copyrightable material, would be going too far. Parties should be free to interact, also because we do not want to prevent right holders from using contracts as a means to limit the use of their intellectual property.

Hugenholtz presented a world without copyright, meaning that there are only two possible options, either to reveal the knowledge or to keep it secret. Hugenholtz enquired if contracts are the suitable manner to enable a greater dissemination of knowledge and if they would expand the public domain or the other way around?

Burkert enquired if contracts and technology are alternatives that serve the same goals or whether they complement one another?

Guibault replied that she could imagine an apparatus that would limit the use by limiting the number of copies or by limiting the use of the software. Practically, technology forces an implementation of contract terms. However, Guibault did not think that contracts and technological measures are identical. Article 6(4) in the Copyright Directive confines technological measures to some borders while, on the contrary, nothing in the directive limits the freedom of contracts.

Helberger referred to Koelman's paper, which argued that theological measures could confine the public domain. Helberger believed that it depends on how you define the public domain. If the public domain is information that is not subject to any private rights, legally protected technological measures are not confining.

Additionally, the public domain is not static and therefore cannot be confined completely, the dynamic nature of the domain causing him to evolve in an unpredictable manner. Helberger also stressed that if the commodification of the public domain is impossible, the lack of profit incentives might lead to a lack in suppliers of public domain raw material.

The problem is not the creation of the new public domain material but in providing access to public domain. Technological measures cannot reduce the

public domain because they are not creating exclusive rights, but they can reduce its accessibility.

Koelman agreed with Helberger, but also emphasized that one can control the access to the public domain, thereby preventing its use. This creates a quasi-legal right on the data, a privilege that is equal to a property right from an economic point of view.

Samuelson indicated that Jane Ginsburg has argued in her paper 'copyright without walls' that a court might allow a right of 'fair breach' where contractual or technical measures affect the public domain. Additionally, there is an added value to contracts because they do bring more transparency, where statutory limitations are unclear. Samuelson saw a threat in the combination of those two, that is, when a technological measure is used to implement the contract, and for example destroy the data when the contract is breached.

Hugenholtz emphasized that the idea, that one can never actually diminish the public domain because the public domain remains there for all of us to take, feeds back to the rule found in copyright law that it does not offer a monopoly but only a shelter against copying.

Cohen agreed. One of the dimensions of the public domain is accessibility, and one of the accessibility dimensions is the easiness to approach and use. One cannot easily bring professional photographic equipment into the 'Rijksmuseum' without special permission, though the paintings are in the public domain.

Another dimension of accessibility is represented in Elkin-Koren's paper regarding search engines.

Guibault stressed that in the US database protection is based on contracts. However, in Europe, there is a property right on database and therefore the balance of interest was established already by the legislator. Superimposing a contract in addition to the given right can harm the legal equilibrium.

DAY II

SESSION IV

The Commodification of Information through the Expansion of Intellectual Property Rights

Copyright, Commodification, and Culture: Locating the Public Domain
Julie E. Cohen

Hugenholtz enquired if the paper suggests another name for the public domain because the term 'domain' creates geographical perception of the matter.

Cohen believed that it is possible to name it differently, however it is hard to assimilate new terms, even in this case where the term is not defined in many laws. The main question is: Can you shift the perception without changing the term?

Another issue is that the term 'public domain' is also used to define government property like national parks even though the government charges admission fees to enter.

Burkert indicated that everybody can use the public domain in the same way, but a more intensive use of it enables the state to demand payment for the utilization.

Dreyfuss observed that the public domain should be defined as the 'domain of accessible knowledge'.

Hugenholtz emphasized that public domain has useful political connotations.

Birnhack stressed that it is more important that the name represents normative values then descriptive elements.

Cohen agreed, but argued that the name should reflect normative values but also represent the current state. People are coming from different places, holding different normative values. We should not confine the public domain to certain bundle of local values.

Birnhack believed that by counting the existing normative differences, you actually derive 'the ought' from 'the is'. Law and society have a strong reciprocal relationship; law should reflect the current social concept but also should reflect desired values as well.

Cohen agreed. In this case, the importance is how you move from a positive to a normative descriptive manner. If you accept the claim that people are getting creative due to the inspiration they derived from the content, the normative value is transposed into law and becomes an endogenous factor in it. There is the content and what the law determines one can derive with it. The state makes law based on how people behave but it also rules how people behave.

Birnhack enquired what would happen if the prevailing social behaviour were copying other people's creations? Should the state change the legal parameters?

Cohen replied that the state should change the law. Fixation of speed limit, for example, is not done because the legislator believes all will follow the rule, but because this act will shift the speed that people drive at. The deviation between law and social norms should not be too big.

According to **Hugenholtz,** there should be room for rethinking the public domain definition in light of the actual process of creativity. A research that describes how creativity occurs would be useful. Perhaps, intellectual property scholars should study a group of creators to examine to what extent artists are using other people's material and public domain material.

Burkert recalled that at the session on Michael Birnhack's paper, he referred to the force model and the geographical model. However, in this case the geographical model might assist to depict 'the ought'. The model described the world as belonging to everybody and the fences as a late distribution of the property. Today society holds the copyrightable materials as the rule and the other materials as the exception, which the geographical model could change. The strategy Cohen suggests is to go back to natural law, when the geographic model suggests returning to the past.

Cohen disagreed that her paper suggests a natural law perspective. Natural law perception observes the inherent ideal of property rights as derived from the effort

that is made in the creation, which is absolutely not what the draft stands for. There is no such thing as back to nature, scholars try to figure how the law should attempt to guide the public actions, while the entire system is constituted by the interaction of people to make it up. This notion is absolutely not to suggest that there is an ideal social practice to adopt or to look for.

According to **Hugenholtz**, no natural law analysis was to be found in Cohen's paper. However, Hugenholtz did recognise the European approach in her paper in the sense that it is centered on the author, instead of on the investment. Cohen agrees.

Koelman believed that the European approach was asking the question why certain stuff should deserve copyright protection, unlike Cohen's paper that asks why certain stuff should not be protected by copyright.

Burkert noted that he had perceived the article wrongly and stressed that he was looking for a strategy to undermine the currently prevailing legitimacy of copyright, any copyright.

Hugenholtz observed that this is not what the workshop is about.

According to **Sherman**, there was a caveat to consider. The research on the creative process might discover that not only copying is part of the process but also commercial incentives. That might undermine what one is trying to achieve, especially in regard to the fair use doctrine.

Cohen indicated that there is a difference between creative processes and commercial practices. Cohen saw Sherman's approach as two separate questions.

Sherman disagreed; there is interaction between the two. Who you pay affects what you do. In the 'The wind done gone', for example, the license payment was not the main issue rather the content, whether the right holder was ready to except the twist in the plot. The payment, the content, and the creativity intertwine.

Cohen believed that this is the reason why copyright should not go there.

Birnhack was troubled by the notion of taking a 'snap shot' of the current creative process and to reflect it into the law. The creative process is sensitive to time changes.

Cohen agreed but also stressed that there is a constant in the creative process. People take stuff from other people and collaborate with each other and neither the replacement of the media nor the progress of copying technologies changes it. Cohen did not believe that one could fix everything but argued that even the 1909 US Copyright Act, which prohibited certain explicit acts by actually naming them, was not such a bad idea. It was a good way to preserve the author's rights.

Hugenholtz emphasized that following the authors' needs raised another danger to the public domain. This notion might legitimise certain acts into much greater extent than the desirable one. A scholar who follows the author's needs almost becomes a 'quasi-technological determinist'. Hugenholtz enquired if an act of substantial reuse is allowed only because someone labelled it as art? Do we need to define a normative line?

Cohen noted that she had not resolved the subject matter in her mind yet, and that more research should be done.

For **Elkin-Koren**, the way to avoid the circularity of 'the ought and is' argument, was to scrutinize the creator's behaviour over time and to try to isolate the

legal implications. This might not help us to examine the individual point of view because the prevailing incentive paradigm is centered on the individual creator not on the industry. However, this kind of research could enlighten us on the price that we are paying as a society.

According to **Dreyfuss**, the sociology goes both ways. If one looks at sociology to examine what material should be publicly accessible, then the other side of the coin is to look more carefully at what the industry actually needs, what really are the needs that push them to invest in creation. It is the same sociological question.

Hugenholtz noted that it resembled asking the old question what is an artist, but from the other side, i.e. not from the productive side but from the consumptive side. Can anyone just do whatever he likes as long as he is an author? Can piracy be condoned by saying that 'this is art'?

Cohen believed that it is hard to examine all aspects together. If one combines intellectual property rights with the theory of the firm, intellectual property rights are a way of organising economic activity in productive ways. There is the academic approach that Elkin-Koren and Dreyfuss presented, and there is the lawyer's or policy makers' approach as well.

Elkin-Koren argued that the public domain changed dramatically in the past twelve years. We can track those changes without enormous effort to analyse the influences.

Salzberger wanted to know if more creativity is always a good thing for society. More creativity may differentiate between people and cultures. Is a bigger public domain needed for our society?

Cohen replied that creativity is the way people are. It is not a matter of better or worse. The alternative is thoughts control. It might not be just better, but the answer is not to limit creativity. The nature of the culture is to evolve.

Database Protection
Mark Davison

For **Rees**, the arguments against the database directive and against the incentives to protect the database creators could be put forward in the context of the WIPO Proposed Treaty on Broadcasting Organizations in regard to signal protection. In both cases, rights are given to the suppliers without any justification.

Hugenholtz stressed that at least the database protection presents a threshold that demands a substantial investment in obtaining, verifying or collecting data as a criterion while the broadcasting treaty would grant rights to anyone who transmits signals. In fact, this problem is inherent in many neighboring rights, like phonogram protection.

Davison was alarmed by the fact that the problem would even seem aggravated after the Advocate General's most recent opinion,[6] where the substantial investment criterion was interpreted as requiring a rather low threshold of investment.

Gjoen pointed out that the EU committee in which he takes part attempts to evaluate this subject matter at the moment, a process that may lead to a future revision of the directive. However, Gjoen stressed that the deadline for the final recommendations is yet unknown. The aim of the evaluation committee is to produce a proposal for an amendment. It is part of a wider project that is centered on possible changes in the copyright area.

Van Eechoud recalled that the directive's main argument was that the European industry was small and unsubstantial in proportion to the US database industry and that there was therefore a necessity to strengthen the European industry. In regard to the discussion on the spin-off theory, Van Eechoud enquired if it would be possible to maintain the directive with a substantial investment criterion. Van Eechoud believed that the spin-off theory as a separate element for the substantial investment criterion would not suffice to push back the bounds of the database directive.

Davison responded that the interpretation of the directive is taken broadly. The wording of the directive is unlikely to lead to satisfactory results. Davison insisted that there exists a discrepancy between what Europe wants to achieve and how it is trying to achieve it. Europe wants to have more databases and therefore grants rights to anyone who makes any substantial investment in obtaining, verifying or collecting any kind of information.

Burkert referred to the fact that the US has held two different attitudes in regard to database protection over the last two decades: the pre-*Feist* era where protection was granted on the basis of the 'sweat of the brow' doctrine and the current doctrine that prevails since 1991 where the 'sweat of the brow' doctrine is no longer accepted. Burkert enquired how the changes affected the US?

Rees answered that more databases have been produced since *Feist*, and that the database industry profit shares are higher.

Birnhack assumed that the production process of databases has changed dramatically in the last decade or so. This change reduced the amount of the 'sweat' needed in the creation process. The importance of the originality in the data selection has decreased because all the data is tagged and the user is the one who does the selection.

Dreyfuss agreed and added that today the creativity has shifted to the software structure and to the search engines.

Dreyfuss also stressed that the ability to technologically lock the database up and contract it out emphasizes that there is no real need for special protection.

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6. Case C-203/02, Opinion of Advocate General Stix-Hackl, 8 June 2004 (*The British Horseracing Board Ltd and Others v. William Hill Organization Ltd*).

Hugenholtz enquired what had changed since the EU directive was implemented in the UK because in the pre-directive days, a strong database protection was given there.

Davison replied that in regard to 'sweat of the brow' copyright, there are exceptions. For example, when considering an act of infringement, Davison did not believe that a court would rule that there is qualitative substantial part of 'sweat'. Regarding skill and labor measures, enough skill is found in database selection and arrangement justifying copyright protection. But measuring labor is actually a quantitative measure. Davison said to be concerned by the quantitative substantial part in the database directive.

Salzberger considered that the harmful effects of the directive are actually minor. The database market will correct itself in the future. Unlike copyright protection criteria, the database protection criterion does not demand creativity in the process of creation. If a supplier blocks access to data or demands an excessive amount of money for it, the market will regulate itself since other competitors will offer the same data for less. If the database directive creates more competition, then the directive has a positive effect in the market.

Davison disagreed; the economic analysis also includes barriers to entry. It depends if a competitor can get access to that information and have the resources to supply the data. The question is how easy is it to enter the specific database market.

Protecting the Public Domain of Science
Rochelle Cooper Dreyfuss and Graeme Dinwoodie

Davison enquired about the achievements gained by mapping the international public domain and said that we should do it nation by nation. Generally, there is a real problem in the context where you have first of all the minimum standard of TRIPS, in addition to the 'TRIPS Plus' obligations imposed by bilateral arrangements, which then have to be accorded to everybody on the basis of the national treatment and the most favored nation clause. What do you achieve by mapping the international public domain other than saying that it is theoretically possible when in reality it is affected by bilateral agreement and other national treatment deviations?

Dinwoodie agreed; the bilateral negotiations are probably the biggest threat to balanced international development of intellectual property. However, in some way, this is the reason to start an international mapping and to 'discover' substantive maxima (as well as moving to establish additional ones). The conventional view is that bilateral agreements can adopt any maximum level that they want, even though some articles in the Berne Convention and in the WIPO agreements can be interpreted as prohibiting some forms of protection. Another aspect of the problem is that parties signed multilateral agreements that explicitly prevent them from derogating from the agreement terms by signing bilateral agreements. There should be articulation of those kinds of restraints in the international agreements to restrain bilateral excesses and thus to insure, *inter alia*, a balance at the international level.

Hugenholtz stressed that the idea of substantive maxima is very interesting and enquired if there are examples in international law, to the exception of the mandatory quotation right of the Berne Convention.

Dinwoodie thought that there are not a lot. There are some implicit references in the WIPO Copyright Treaty. One would have to be relatively aggressive to interpret the WCT as imposing maxima. But this only highlights the need to start developing them.

Dreyfuss indicated that the Doha Convention re-invigorated articles 7 and 8 of the TRIPS Agreement, by saying that they need to be used and the TRIPS Council has authority to implement ways of utilizing them. In addition, some mandatory exceptions exist in the European directives, like decompilation for interoperability, which could be interpreted as substantive maxima at the EU level.

Sherman referred to the situation of developing nations. There is a trend in other areas like the International Convention on Biodiversity to try to achieve similar results. But in fact, the results achieved are the exact opposite, with for example the disappearance of the notion of the Common Heritage of Mankind. Developing nations have problems with negotiating a good trade-off with developed nations, especially in the context of the TRIPS Plus agreements.

Hugenholtz enquired which international forum would be the most convenient to implement the substantive maxima thresholds and what kind of instruments would be adequate to serve this goal? Is it adopting international law of users' rights at the WIPO level or amending existing instruments, and if so, which ones?

Dinwoodie replied that the WIPO forum is friendlier than the WTO forum and therefore a good place to start. The subject should be on the agenda of the Standing Committee.

Van Eechoud referred to Dreyfuss' and Dinwoodie's paper with respect to the expansion of patent rights to university research and development. Van Eechoud emphasized that if universities were given patent rights, which would enable them to develop patent portfolios, they could use it to trade with the industry. However, the other option presented in the article, is to enable research in university through compulsory license or through the exemption of universities from liability to patent infringement. Van Eechoud enquired, in regard to the last solution, if it would not create a situation where university research results are left without any patent protection.

Dreyfuss pointed out that if university research is patentable, courts can argue that universities are like any other patentee and therefore entitled to the same treatment. Dreyfuss also emphasized that the implications of this outcome could harm the universities. An academic institute is not a business entity, and therefore cannot spend resources only on patents and research. University employees are not fungible like other research employees and cannot neglect their educational mission for commercial research. In addition, universities cannot use their funding to subsidize expensive patent lawsuits either as plaintiffs against patent infringers or as a defendant in a patent lawsuit. Recognising that universities are not in the same position as other patentees is important, but apparently, it is not the current notion. Nowadays, faculties, especially younger faculty members, may be forced to carry

out research that they would not have done without patent incentives. In regard to state universities, it seems that they are even worse then the private universities. They act as if they are under an obligation from the state to patent their knowledge, arguing that the state funded the research and therefore they are obligated not to relinquish the fruits of their research.

Elkin-Koren observed that the commercialisation of the research is causing academic centers to compromise in regard to their ethics and their academic values. This problem may also cause the academia, as an institution, to lose her status in the society. There is a lot of criticism in the academia of the current commercialisation trend.

Going back to Hugenholtz's question of which forum is the best suited for an international agreement, **Franz** points to the fact that there is some work being done within a number of non-governmental organisations to identify what is WIPO's mission, whether it is only trying to get more intellectual property protection or establishing a balanced system.

SESSION V

The Commodification of Different Types of Public or Private Information[7]

Toward an Indigenous Public Domain? Leanne Wiseman And Brad Sherman

Hugenholtz enquired which legal framework should reflect the social and culture norms in different communities? Hugenholtz also enquired if the state should try to adopt those norms as they are or should we take a broader social interest point of view into account. Indigenous cultures do not exist in a vacuum. Where is the general public interest represented in the article?

Sherman replied that it is incredibly difficult to balance the general public interest and the interest of indigenous cultures. The problem is to accommodate local culture to the current intellectual property regime and the western public order. The Global Insight model actually maps the culture in certain areas and enables indigenous people to practice their own law within the geographic boundaries. However, this is not a practical solution in regard to intellectual property. One cannot export rules of property usage. Therefore, the community should decide how to integrate the cultural norms.

Elkin-Koren indicated that the real question is whether the western and liberal society can justify an enforcement of those norms.

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7. The paper written by Corien Prins, 'Property and Privacy: European Perspectives and the Commodification of our Identity' (*see* p. 223 in this volume) was not discussed during the workshop because the author was unable to attend.

Birnhack defined the discussion as a multiculturalism discourse, a question of relationships between the state and the minority. Wiseman's and Sherman's paper actually describes a process of reverse multiculturalism, beginning with the groups and going up to the society as whole. Birnhack enquired whether Sherman and Wiseman expect that the rules of a single small society will apply outside?

According to **Wiseman**, in some communities in the north of Australia, the customary law is implemented. When an indigenous man makes an assault on his wife, he can choose between the state law and the customary law at the first felony.

Some indigenous societies believe they are losing control over their culture. Allowing them to implement the customary law might calm their feelings. Wiseman does not think that the indigenous people expect other people to comply with their customary law.

Sherman emphasized that indigenous societies do not have the same fundamental beliefs and therefore grasp the western legal system differently. Developing a mechanism that would allow local customary law as much as possible is needed.

Cohen indicated that in a democratic regime people can practice their beliefs, as weird as they are as long as they do not harm other people. Cohen did not see the added value in implementing minority cultural customs and what the society would achieve from that. There is an equality problem, when one allows these indigenous societies to dictate their behaviour to the world.

According to **Sherman,** the problem at the moment is that centralized exogenous bodies determine what is tradition and what is not for the indigenous people. Those decisions should not be made without the participation of the indigenous people. It is not just the knowledge and revenue factors that matter; the control over tradition is what binds them together and gives them comfort in living in the shadow of Western society.

Cohen enquired if Sherman recommends to prohibit any reproduction of aboriginal artefact or just to prohibit the use in the aboriginal designs or knowledge? What is the justification for a broad prohibition?

Hugenholtz stressed that traditional culture and knowledge agenda might be only a trick of the West to make the Third World countries adopt the enlarged intellectual property model.

Wiseman agreed; this was very true. She knew it is a trade-off.

Sherman disagreed; the people who are working in this field know the importance of the issue.

The Commercialization of the Public Sector Information. Delineating the Issues
Mireille van Eechoud

Dreyfuss referred to Van Eechoud's arguments in her article and emphasized that the lobby that tried to pass the Bayh-Dole Act in the United States used the same arguments. Dreyfuss observed that although people think that the Act was aimed to enrich universities and to enable them to hold patents, the real reason was to create incentives to dig into the material and to try to commercialise it. Dreyfuss

also explained the rationale of the exclusive license system of the Bayh-Dole Act. American universities engage in exclusive licensing arguing that the first licensee has to invest a lot of money in order to use raw university data and commercialise it. Without the exclusive licences, the first licensee would loose out to 'free riders'. But exclusive licensing is not the perfect solution.

Van Eechoud pointed out that the database right has some positive effects here. A non-exclusive right is not interesting for the private sector. A database right is given on derived products and can be used against free riders without blocking the competition.

Additionally, an economic deficiency might be created as an outcome of the duplication of the database.

Hugenholtz criticizes Van Eechoud's first argument and emphasizes that non-exclusive licenses can be attractive to business entities, like in the music industry for example where all the agreements are non-exclusive.

According to **Burkert,** the negative effects of the directive might be driven by the fact that the directive goes beyond cost recovery. It seemed like a fundamental breach of the public law framework: the law of public fees. The upper benchmark is cost recovery and it seems that we are going beyond that. Burkert also saw the fact that there is an involvement of public investment in the creation of the informational good as a problem. Governmental sponsored goods should be exempted from copyright law, because of the strong bound between copyright and competition laws, inherent from the fact that granting copyright is actually granting a monopoly. This should be acceptable only when competition laws permit it. However, the grant of copyrights is exempted from the European rules on competition.

Hugenholtz agreed with Burkert's argument and emphasized that this notion was already reflected in an early proposal of the database directive. It was argued that government-produced databases should be offered to everyone under equal, non-discriminatory and non-exclusivity terms, like in the directive van Eechoud scrutinized. Hugenholtz emphasized that copyright protection regarding governmental information in Europe differs from one Member State to another. This is an obvious field for harmonization. Hugenholtz also emphasized that the current incoherent model is an impediment to the free trade system in Europe**.**

SESSION VI

Possible Alternatives to the Commodification of Information

Creative Commons
Niva Elkin-Koren

Open Source Software
Maurice Schellekens

Cohen referred to Schellekens' paper, which refers to technical protection measures as a tool to encourage demand for open source software. Cohen believed that it is true but it is only part of the story. The application of technical protection measures and the adoption of laws, such as the Digital Copyright Millennium Act (DCMA), create barriers to entry that affect the open source model, particularly in regard to the consumer area where strong Digital Rights Management (DRM) systems are protecting personal computers and DVD technologies. Even though there are exemptions in the DCMA for reverse engineering, security testing and encryption research, it seems that those exemptions were crafted to discourage the open source model. This flows from a DMCA provision that instructs authorities to check if, by sharing the research information, the publisher facilitates the infringement of the law. An inherent part of the open source model is the worldwide publication of the code. In as much as this information facilitates the circumvention of the technological protection measures, it is a prohibited publication and an infringement of the DMCA. In other words, the open source model cannot fit in this structure. Presumably, open source and technical protection measures covered by DRM are incompatible philosophically.

Hugenholtz emphasized that the prevailing acceptance of GPL agreements is the outcome of a powerful social norm in an homogenous community, as Elkin-Koren argues. In addition, Hugenholtz pointed out that the fact that people with high morals follow the GPL agreements in the open source community is a good sign and something to be glad about.

In answer to Elkin-Koren's question as to whether there exists comparable social movements with legal recognition, **Burkert** referred to the social credit movement in Canada. The problem with this social movement is that it is a mimicry of what is already there. Creative Commons plays the same games but they reverse the copyright sign.

For **Samuelson**, one of the future impediments to open source is a trusted computing platform. Samuelson emphasized that it is not clear yet how the model would be assimilated in the market. However, it seemed that those platforms would not support open source products. Even if the software were compatible to the terms, they would not interact with the hardware without the vendors' certification.

Van Eechoud enquired whether the fact that copyright is used in Creative Commons has an extra negative effect in comparison to the technological measures? And, if the increased use of a license that demands authorization is part of the cause?

According to **Cohen,** the Creative Commons' ultimate goal is to get enough people to think differently about copyright. Cohen believed that this is done with a view that you need enough supporters to create the thrust that is needed to change copyright's legal baseline. Therefore, Cohen believed that we should not be too hard on the Creative Commons in regard to this issue. Additionally, Cohen generally agreed that Creative Commons' model is leading to a proliferation of different licenses causing consumer confusion and raising transaction costs. However, Cohen believed that scholars should bear in mind that uniform agreement is exactly the cause for bad 'shrink wrap' agreements.

Elkin-Koren reminded everyone that if we are going to create another layer of private ordering on top of the property right layer, it might substantially increase the transaction costs. If the Creative Commons' model is an interim process until the law changes, then it is all right. However, Elkin-Koren did not believe that the model was an alternative to a change in the current legal copyright framework, mostly because it creates superficial regime of private ordering that can easily get out of hand, because it empowers the user to set the rules. Elkin-Koren suggested that more commodification might be the result of adopting the Creative Commons' model. Elkin-Koren believed that the Creative Commons' perspective is to promote a free environment of creation and therefore, Creative Commons is a discourse and not a market exchange. Elkin-Koren sympathized with the Creative Commons' goals but was concerned that it might turn around the opposite way and make us trade in works, rather than share and exchange ideas.

Secondly, Elkin-Koren referred to her article and argued that she did apply a strict definition of the public domain as a mirror of the property regime, a definition that might be changed in the light of Dreyfuss's perception of the public domain.

Schellekens observed that in a world of free open source software, technical protection measures cannot contribute much and therefore the discussion is confined to the propriety software world.

End of discussion!

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THE FUTURE OF THE PUBLIC DOMAIN

Identifying the Commons in Information Law

Lucie Guibault and P. Bernt Hugenholtz (eds.)

The presence of a robust public domain is an essential precondition for cultural, social and economic development and for a healthy democratic process. But the public domain is under pressure as a result of the ongoing march towards an information economy. Items of information, which in the 'old' economy had little or no economic value, such as factual data, personal data, genetic information and pure ideas, have acquired independent economic value in the current information age, and consequently become the object of property rights making the information a tradable commodity.

How and to what extent does the commodification of information affect the free flow of information and the integrity of the public domain? Does the freedom of expression and information, guaranteed inter alia in the European Convention on Human Rights, call for active state intervention to 'save' the public domain? What means – both legal and practical – are available or might be conceived to guarantee and foster a robust public domain? These were the main questions that were addressed in a major collaborative research project led by the Institute for Information Law of the University of Amsterdam (IViR) in co-operation with the Tilburg Institute for Law, Technology and Society (TILT) of Tilburg University, and funded by ITeR, the Dutch National Program for Information Technology and Law.

Thirteen contributions from academia worldwide make up the present book, addressing the future of the public domain from a different angle. In addition, all authors were invited to reflect upon the notion and role of the public domain in the context of information law and policy. Should this concept be limited to that of a 'negative' image of (intellectual) property protection, i.e. all publicly available information not subject to a property right, and therefore freely (i.e. gratis) available, or should a broader approach be taken, e.g. all information available from public sources at affordable cost? Should information policies be aimed at maximizing the public domain or optimizing information flows? To what extent are these aims congruent?

This book takes a broader, 'information law' oriented approach towards the question of preserving the public domain, in which a wide range of interrelated legal questions converge. Issues treated in this book include:

- Economic analysis of the public domain
- Fundamental rights analysis of the public domain
- Impact of the application of technological protection measures and contractual restrictions on the public domain
- The impact of the expansion of copyright, database right and patent rights on the public domain
- The impact of the commodification of private data, government information, indigenous knowledge on the public domain
- The capacity of the Open Source and Creative Commons Movements to preserve the integrity of the public domain

The Future of the Public Domain is an important work for all those interested or involved in the regulation of the knowledge economy. Legal scholars, academic and research institutions, corporate counsel, lawyers, government policymakers and regulators – all these and more will benefit enormously from the thoughtful and incisive discussions presented here.

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