Book Review

The Digital Dilemma: Intellectual Property in the Information Age,
Committee on Intellectual Property Rights in the Emerging Information
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Released in February 2000, *The Digital Dilemma* is the latest of a series of
studies about legal issues relating to computer technology commissioned by
the Computer Science and Telecommunications Board under the auspices of
the National Research Council (whose Governing Board draws its members
from the National Academy of Sciences, the National Academy of
Engineering, and the Institute of Medicine). Earlier studies were *Intellectual
Property Issues in Software* (National Academy Press, 1991) and *Rights and
Responsibilities of Participants in Networked Communities* (National
Academy Press, 1994).

The project leading to this book was funded by the National Science
Foundation early in 1997 and got under way with the appointment of
eighteen members to the Committee on Intellectual Property Rights in the
Emerging Information Infrastructure, chaired by Randall Davis of MIT and
supported by six staff personnel. The Committee's assignment was "to assess
issues and derive research topics and policy recommendations related to the
nature, evolution, and use of the Internet and other networks, and to the
generation, distribution, and protection of content accessed through
networks" (x). The Committee was designed to be "a microcosm of the
diverse community of interest" (xi) and so included "experts from industry,
academia, and the library and information science community, with expertise
that spanned networks, computer security, digital libraries, economics and
public policy, public and academic libraries, intellectual property law,
publishing, and the entertainment, software, and telecommunications
industries" (x). Among the Committee members most likely to be known to
readers of this journal were Karen Hunter of Elsevier Science and Clifford
Lynch of the Coalition for Networked Information.

"Because of the contentious nature of intellectual property issues," the
Preface points out, "every effort was made to ensure that a broad range of
perspectives was represented—on the membership of the study committee, in
the solicitation of briefings and other inputs to committee meeting agendas,
and in the materials distributed to the study committee" (xi). It is clear from
the list of those who were invited to provide input to the committee—thirty-
two experts who gave briefings at two meetings in 1998 and twenty-nine

people who were asked to review the report in draft—that this was indeed a serious effort to gather information and opinion from a wide range of stakeholders. Indeed, in the final chapter, "Conclusions and Recommendations," it is argued that "one of the committee's key contributions is to urge an appropriately broad framework for use by policy makers, one that acknowledges the full spectrum of stakeholders and forces" (200).

It is all the more regrettable, then, that the one voice left out of the discussion was that of non-profit publishers, even though I know that one of the commercial publishers asked to review the draft, Charles Ellis of John Wiley and Sons, urged the Committee to seek input also from our part of the publishing world. Because of their dual identity as members of the publishing industry and the academic community simultaneously, scholarly societies and university presses have a unique perspective on intellectual property issues that spans the often wide gulf between the for-profit and non-profit sectors and puts them in a position to mediate differences. There was a missed opportunity here to widen the base of viewpoints represented even further, though it must be added in fairness that individuals on the Committee like Clifford Lynch are very familiar with non-profit publishing.

This quibble about representativeness aside, *The Digital Dilemma* can be recommended as a truly excellent report—very informative and balanced in its coverage of intellectual property issues generally and well worth reading, especially by anyone who wants to get an overview of the complexity of the debates surrounding copyright and technology today. What sets this book apart from other recent studies of intellectual property is its emphasis on the interrelationships among law, technology, social norms, business models, and even individual psychology; all, it shows, must be taken into account if we are to resolve some of the major challenges confronting us in the digital environment. In this regard, the book provides a superb case study of the controversy over MP3 in Chapter 2, entitled appropriately enough "Music: Intellectual Property's Canary in the Digital Coal Mine." (The report was finished before Napster came on the scene and captured headlines, but this chapter contains many lessons that apply to the Napster phenomenon as well.) (1) This case study alone is worth the price of the book. Anyone concerned about formulating a business strategy to survive in the digital arena over the next decade would do well to read *The Digital Dilemma* and heed its lessons. Like all of the National Academy Press's publications, it can be accessed through the Press's website (http://ww.w nas.edu), but it is long enough not to make online reading—other than browsing—a convenient option.

Besides the valuable case study of music in Chapter 2 as an arena where the new challenges of technology to law are being played out very publicly today, the book has much else to offer. The first chapter (after a 22-page Executive

Summary that readers can use for a quick overview) provides an excellent survey of the special characteristics of the "odd new world" of cyberspace that create difficulties for the application of traditional concepts of copyright. Publication in the medium of print, for example, "is public, it is irrevocable, and it provides a fixed copy of the work; in the digital world none of these may be true" (42). Printed works, once distributed, are not readily changed (and thus fixed in their basic form), are available to the public in libraries, and cannot be taken back out of circulation easily (hence are irrevocable). But postings on computer networks can be withdrawn at any time, can be restricted to a limited audience, and can be revised continuously, leaving no trace of the original behind. Partly for these reasons, licensing has come to be a primary legal mechanism for distributing electronic works. One of the main themes of Chapter 1 is its emphasis on "the variety of forces at work . . . such as markets, social norms and the values embedded in hardware and software" and the great range of interests involved. Indeed, the chapter helpfully concludes with a 15-page addendum that identifies, group by group, the main concerns of stakeholders.

Chapter 3 focuses on the important constitutionally sanctioned goal of copyright to secure "Public Access to the Intellectual, Cultural, and Social Record" (as the chapter is titled). Here the "promise and peril" of licensing as a legal means of providing access are carefully examined, especially in relation to the role of technical protection services (TPS), and some attention is devoted to the special issues of non-copyrightable databases and the accessibility of federal government information. The other major concerns of this chapter are the challenge of archiving and preserving materials in digital form and the contributions, both positive and negative, of TPS to this problem.

Chapter 4 looks at "Individual Behavior, Private Use and Fair Use, and the System of Copyright." After exposing common myths about what copying individuals are or are not permitted to do that are held by the general public and even by some rightsholders, the chapter discusses the debate between those who hold that there is a general privilege of "private use" and those who argue that there is no such privilege beyond what the doctrine of "fair use" itself sanctions. The Committee here responsibly notes that "although Congress chose to adopt some specific exceptions to the reproduction right to respond to concerns of libraries and archives, it decided that private use should be dealt with in the context of fair use" (132). Furthermore, "the fair use provision of US copyright law envisions mainly 'transformative' uses of a protected work as fair," whereas copying for private use "is generally regarded as 'consumptive' in character (e.g., use of the work so as not to be put to the trouble of paying money for it)" (132). The Committee, despite this acknowledgement, abstains from taking sides in this dispute, saying only that it "does not endorse the view that all private use copies are illegal or the view that all private use copies are legal" (135). The chapter ends by asking "Is

'copy' still an appropriate fundamental concept?"—a question to which this review will return.

Chapter 5 begins with a section offering basic information about the technical mechanisms that exist for protecting intellectual property and their capabilities and limitations. Readers who are novices in the arcane world of computer technology will find this overview especially helpful. Going beyond the roles that law and technology play in protecting intellectual property, the chapter next investigates how business models can have a crucial impact on mitigating the potential damage caused by digital copying and even exploiting its special characteristics for entrepreneurial advantage. Both traditional business models and others that have come to be deployed especially to deal with information as product—such as giving information away while earning revenue from an auxiliary product or service—are surveyed, and their implications for intellectual property explored. How much illegal commercial copying (piracy) actually exists today and whether the measures we have of it are accurate and adequate are subjects tackled in the following section. Finally, the chapter looks at how patent law has come to have an increasingly significant influence on the strategies of the information industry, first through the dual protection that is available to computer programs under patent and copyright regimes and more recently through the courts' recognition of the patentability of "business methods" (such as the one-click-ordering and affiliates-program technologies that Amazon.com has been severely criticized for suing to protect during this past year).

The final chapter, "Conclusions and Recommendations," deserves careful study by anyone involved in charting the future of the information industry, as it sets forth a framework for thinking about all the complex issues involved—legal, economic, technical, social, moral—and how they interrelate. Just because of this complexity, which is baffling even to experts, and because intellectual property is now impinging on the daily lives of average people more than ever before, the Committee recommends that a broad educational program be undertaken "that emphasizes the benefits that copyright law provides to all parties." As the Committee concludes, "A better understanding of the basic principles of copyright law would lead to greater respect for this law and greater willingness to abide by it, as well as produce a more informed public better able to engage in discussions about intellectual property and public policy" (217).

A 10-page Bibliography (which includes many website addresses) follows, and then seven appendixes, which offer everything from a primer on information economics to a discussion of the differences between the Internet and telephone networks, to a more detailed explanation of security technologies (to supplement Chapter 5), to a commentary on as well as a reproduction of section 103 of the Digital Millennium Copyright Act of 1998.

One of the book's more innovative, and potentially controversial, suggestions (144-45) is that the constitutional purpose for copyright as "promoting the progress of the sciences and the useful arts" might be a better foundation for a workable policy than a focus on copying per se, since what is considered "copying" has become so contentious in the digital environment, with computers making "copies" automatically as a result of their basic functioning. This is formulated in the last chapter (232) as a recommendation and is worth quoting in full:

> The committee suggests exploring whether or not the notion of copy is an appropriate foundation for copyright law, and whether a new foundation can be constructed for copyright, based on the goal set forth in the Constitution . . . and a tactic by which it is achieved, namely, providing incentive to authors and publishers. In this framework, the question would not be whether a copy had been made, but whether the use of a work was consistent with the goal and tactic (i.e., did it contribute to the desired "progress" and was it destructive, when taken alone or aggregated with other similar copies, of an author's incentive?).

This concept is similar to fair use but broader in scope, as it requires considering the range of factors by which to measure the impact of the activity on authors, publishers, and others. On the one hand, this is a proposal that non-profit publishers, university presses, and scholarly societies alike have good reason to welcome, as it can only help reinforce the argument that "transformative" or "value added" uses are the core meaning of what copyright law sanctions under "fair use" and other exemptions, not copying that is merely duplicative or parasitical upon the original author's or publisher's effort. On the other hand, one can only wonder where this leaves "personal" copying for the purpose of mere entertainment, which is not easily squared with the constitutional goal of promoting knowledge. Do we really want to let MP3.com and Napster off the hook so easily?

While in this final recommendation the Committee takes care to mention the incentive of authors and publishers both, it is not as careful elsewhere in the book. On page 144, for example, the text refers only to 'incentive to authors' in developing this proposal. It is dangerous to downplay or ignore the role that copyright plays in providing incentives to publishers, especially since, as the report notes elsewhere (225), most academic researchers advance in their careers "by giving it away." For university presses whose publications predominantly originate from the academic community, copyright protection provides a currently indispensable base of legal support for their operations. And, indeed, in stating its twenty Principles for the Formulation of Law and Public Policy (236-38), the Committee accords recognition to, while also acknowledging differences between, the needs of both authors and publishers in Principle 6, which reads in part: "Enough deference should be given both to the interests of creators to ensure that creators will not be deterred from

pursuing their work, and to the interests of publishers so that they are not deterred from their central role in disseminating works."

At the same time as it is important to recognize the dependence of university presses on copyright protection now to ensure the economic viability of their business, it is equally important to be aware that university presses could operate on a model not requiring such dependence. Indeed, a good argument could be made on the very criteria set forth in Appendix D, on the economics of information, that the most efficient model for university press publishing, all things considered (including the legal costs of protecting copyrights), would be to have the first-copy costs of publishing covered by grants from universities—not just universities that operate presses but (as the National Enquiry into Scholarly Communication recommended in its report way back in 1979) every college and university whose faculty participates in, and benefits from, the system of scholarly communication as it exists today. Appendix D identifies the "main distortion" in this model as arising from "deciding which activities to reward and then calculating the appropriate payment" (275). But the granting agency, where university presses are concerned, is the same entity that determines, via faculty editorial boards, what publications are most wanted by the market and that oversees the operation of the publishing houses involved; this internalization of the process overcomes the defects of this model that Appendix D argues to be its primary disadvantage relative to the two other models it outlines. The effect, for presses, of operating on a grants model would be to lessen their economic reliance on copyright law (which would remain important to authors, however, insofar as it affords protection against plagiarism). In fact, presses could then feel free to take full advantage of digital distribution and allow their publications to be accessed for no charge anywhere in the world. This would maximize the values of public access that the Committee is so keen to ensure and provide a kind of new foreign aid to underdeveloped countries that are unlikely ever to close the gap in efficient distribution of print materials but could, at least in major university centers, allow scholars all over the world to benefit from the fruits of new scholarship published by university presses through the Internet. Such a vision, one may hope, would please the authors of *The Digital Dilemma*, who have done so much here to stimulate new ideas about grappling with the challenges of the digital age. And, indeed, it would be fitting, since this book itself is available to anyone who can access the National Academy Press's website.

(1) MP3 is a compression format that turns music on CDs into small computer files, taking up about one-tenth the space of uncompressed files. Napster is the name of a company started in September 1999 that provides a free software program allowing one to locate MP3 music files on other individuals' computer hard drives and copy them onto one's own computer. Napster has been sued for copyright infringement by both the Recording Industry Association of America and the rock band Metallica.