1. Introduction

1.1 ECONOMICS AND COPYRIGHT

Copyright for original works is now protected in the US by the Copyright Act of 1976, which is now codified in Title 17 of the US Code. Section 102 of the Act extends copyright protection to original works of authorship that are fixed in any tangible medium of expression. Eight identified works of authorship include material of literary, musical, dramatic, choreographic, pictorial/sculptural, audiovisual, sound recording or architectural nature. Section 106 grants to copyright owners generally exclusive rights to make reproductions, prepare derivative works, distribute copies, make public performances and publicly display controlled works. However, the Act elsewhere provides important restrictions on the exercise of these rights, including fair use, term duration, the idea-expression dichotomy, the first sale doctrine and exemptions for libraries, education and the blind and the handicapped.

The economic justification to protect with copyright an artistic work or software is reasonable. A large fraction of production costs must be incurred upfront, with considerable expense and effort to create and work up for market. Without copyright protection, the resulting product is nonexcludable, in the sense that later access to content can be available to all who see or hear it. While free reproduction, performance and display may benefit users, such takings can expropriate from creators due rewards for invested efforts. In time, the danger of expropriation compounds and reduces the incentives to create content in the first place. One general economic remedy for the economic problem then is to establish property rights through protective social agreements – i.e., copyright.

Economists then generally defend some form of copyright as a collective arrangement that provides incentive and security for artists, writers, publishers and programmers. That is, copyright protection creates a legal right against unsigned parties that is made viable by a legislative compact that no one individual could effectively negotiate and enforce. When producer rights are secure, additional incentives for yet more creation presumably follow. Indeed, the stated purpose for the US patent and copyright system supports an economic instrumentalism based on incentive, which varies philosophically from a European perspective that recognizes the concept of an inalienable moral right that is attributable to the author’s inner personality.
However, copyright presents two key countervailing concerns. In exercising or protecting their copyrights, rights owners may increase unit prices above the level of short-run marginal cost (i.e., zero), which is the economically efficient price in static market equilibrium. Moreover, in pursuing payment for access, rights owners may impose additional transaction costs for search and negotiation in a manner that may discourage a number of uses that are otherwise economically efficient.

The conceivable inefficiencies of copyright may realistically be compounded when owners have access to protective legal instruments. If so empowered, owners may uneconomically extend term duration, establish overlapping rights, and otherwise garner rents for existing works without creating additional incentives. Subsequent to production of a protected work, the institutions of intellectual property (IP) can provide rent-seeking opportunities for spinoff activities that are entirely ex post and unproductive of real incentives. All things considered, an overly protective process can actually reduce the cumulative knowledge that can be shared among the common citizenry and the creative community. Such concerns about undue protection have inspired academic calls for an ‘information commons’ – ‘a rich public domain of materials whose copyright has expired presumably creates a freely useable set of information that an individual can draw upon for any purpose whatsoever.’

However, copyright owners may rely upon considerable market contingencies to counter their academic critics in several important respects. First, the capabilities of the Internet have greatly reduced the costs of monitoring use and transacting for permissions. Second, licensing agents have designed a wide range of contracts and institutional arrangements to accommodate ease of use at a zero unit price; a reasonable fee is instead extracted upfront from each user based on total sales revenue, size of establishment or number of licensed sites, inter alia. Third, there are coordination economies to be had by avoiding overuse of particular artistic properties, e.g., screenplay writers who transcribe original books may reasonably be required to obtain permission so as to ensure coordinated development and profitable release of the movie and possible sequels. Finally, the control over secondary products may enhance original incentives, e.g., the producer of a console for videogames may increase expected profits and lower its introductory price if it can sell or license complementary games at protected prices.

The tensions and contradictions of copyright now devolve into an international dialog that can be aided by the complementary disciplines of law and economics. The legal process is pure social convention; it maintains its societal order largely through interpretations of statutory wording, legislative intent, and judicial precedent. Economics is presumably social science; it
Introduction

purports to conceptualize processes and predict reality without any necessary deference to previously enacted laws. If legal and economic considerations are in balance, the legal stratum must ride atop the scientific, i.e., social procedure must in the end be based upon actual reality.

1.2 LAW AND ECONOMICS

Starting in the 1950s from the intellectual collaboration of the University of Chicago’s Edward Levi and Aaron Director, the discipline of ‘law and economics’ has moved from classroom dialog and academic journal to the abiding economic philosophy of the Antitrust Division, the minds of several appellate judges, at least one best-selling political work, and the course catalogs of the nation’s best law schools. In antitrust, the Chicago School contributed in the past three decades to a string of economically sensible cases regarding merger, vertical restraint, and predatory pricing. These cases elevated market efficiency above judicial interpretations of legislative intent, that had aimed instead to protect small producer interests. Economic considerations also made their way into key patent cases that defined the ‘but for’ world that damage experts must properly consider when estimating economic harm resulting from a patent infringement. Adding economic reasoning to a structural inquiry then gives courts ‘breathing room to consider common-sense facts related to efficiency, as well as to think about what sorts of behavior would be rational in the relevant market’.

Lawyers and trial judges must condition their actions with an awareness of economic efficiency and how free markets operate. Imagine the following situation. A rancher lives next door to a farmer, and his cattle trespass and ruin the farmer’s crops. The farmer sues to enjoin the rancher, and the court deliberates to create a just solution. What to do?

R.H. Coase suggested that parties ideally might be left to barter indefinitely to determine who is willing to pay whom for the right to continue or stop a particular action. For if an injunction were instituted inefficiently for the plaintiff, the defendant could pay the plaintiff voluntarily to lift the injunction, and the resulting settlement terms could then be structured to leave both parties better off. By contrast, no such accommodative exchange is possible if the starting position is already efficient. In this ideal market theater, courts may award verdicts, but any legal result will be irrelevant to the eventual outcome that will (and should) prevail if property rights can be exchanged in costless transactions.

However, the ideal Coase Theorem generally depends on three conditions:

1. There are no transaction costs – e.g., haggling, holdout, cheating and other
negotiating difficulties – between contending parties that impose costly delays or foreclose settlements entirely.\(^3\)

2. There are no excluded ‘third parties’ who lack court standing. Otherwise, the benefit or cost of market externalities are not properly represented or valued in the later transactions.

3. There is no market power, i.e., the parties value the contested resources at true economic value and not as strategic instruments that can raise prices, deter entry or affect rival choices.

There are four conceivable options should any supporting condition fail. First, courts may measure respective costs and benefits of each alternative outcome and choose a winner based on a rational-comprehensive\(^3\) analysis of all factors involved. In the above example, either the farmer or the rancher may be determined to suffer the greater economic or moral loss.

Second, legislatures can impose a general levy upon the products that are used for or related to tortious activities. For example, all cattlemen in the county may pay a head tax on cattle to cover possible damages resulting from overgrazing. The revenues garnered from such levies can be used to compensate victims for demonstrated or estimated losses.

Third, the defendant may be required to compensate the plaintiff for imposed costs,\(^3\) e.g., the rancher may be required to compensate the farmer for lost crops resulting from overgrazing. In such an instance, the plaintiff will be made whole for his losses, and the rancher’s activity will continue only if his private benefit exceeds the damages that he imposes and pays for. Optimal liability rules can then be used if the appropriate measure of damages can be accurately assessed, and no additional punitive restitution is deemed necessary.

Finally, judges can mandate specific preventive actions to limit harm. If efficient, the legal system would place responsibility on that party who could prevent the trespass most cheaply.\(^3\) For example, the farmer may be required to put up a fence. However, there is no economic reason why courts must limit liability solely to one provider;\(^4\) a bilateral resolution would be particularly compelling if different preventive methods could resolve different aspects of the same problem, or otherwise improve economic efficiency or perceived fairness.\(^4\) Alternatively, the court may order one party to undertake the investment, and order the other to compensate her.

Each of the four specified options presents problems:

1. A rational comprehensive approach requires the courts to identify all relevant effects and perform a global cost–benefit analysis. This may include estimating the net social values of certain considerations and contingencies, as well as their likely probabilities. Such comprehensive
Introduction

analysis is particularly difficult in the digital marketplace, where so many contingencies are open-ended.

2. General levies have the unfortunate distinction of being placed on non-infringing parties, and raising the product prices to a particular consumer regardless of his likelihood of imposing harm. Moreover, levies also provide no incentive for potential trespassers to limit their harmful activities.

3. Though economically attractive, liability rules still require accurate measurement of prospective damages. If careful measurement is not possible, parties may have incentives to misrepresent relevant magnitudes in order to extract more favorable terms.

4. Efficient fence-protection may require technological assessments, and may additionally impose considerable financial responsibilities upon the non-offending party. Though cross-compensation is possible, the relevant magnitudes may be difficult for a court to determine, or others to discern objectively.

1.3 INNOVATION AND COMPLEXITY

As an economic concern, this book considers how markets and institutions may allocate property rights in intellectual property to competing ends. In the paradigm of Schumpeterian capitalism, these processes are part of a social mechanism that enables the process of ‘creative destruction’ of new ideas, creations, and processes of production and distribution. Economic efficiency is here gauged by the production of new innovations, rather than by the microeconomic consideration of aggregate social welfare at any one moment. Indeed, to provide the spur for innovation, we often permit the short-run inefficiencies of monopoly power.

However, law is also an investment in harmonious social process, and rules must be designed to assure predictable – if not perfect – resolution of conflicts. Satisfactory legal governance must recognize the complexity of systems where resources are scarce, technology evolving, surveillance imperfect, intelligence widely distributed and information open-ended. As a social contrivance for managing complexity, common law is incrementalist and experimental – restricting considerations, limiting information, forsaking measurement and attempting to learn by doing.44

In integrating law and economics, we are then engaged in a ‘science of the artificial’, which generally comprises the symbols, controls and responses for resolving immediate threats and moving the system toward a long-term order. The intelligence of the system is gauged by the efficiencies and general ‘wisdom’ of the outcomes achieved in common and statutory law.
1.4 THE DIGITAL WORLD

One short decade ago, the copyright issue occupied the attention of no more than a few individuals in a world of media built around printing presses, celluloid film, record vinyl and analog broadcasts. Photocopiers were more distributed, particularly in libraries and workplaces, but not commonplace in private homes. Video and audio recorders made imperfect copies that were made most often for self-use; general copying for lending and distribution to friends and strangers had been deterred by the physical inferiority of sequential copying and the physical difficulty of widely distributing tape copies.

Copyright issues moved to center stage in the policy arena with the advent of digital technology and the capacity of the Internet to move audio, video, text and numeric data from point to point in a short amount of time. As digital technology develops further, cinema fans will access movies at any hour, music fans may sample or download tunes from an historic catalog, art lovers may cybertour any great museum in the world, and e-book purchasers may replace visits to libraries and bookstores with convenient downloads. Hyperbolically, ‘in this vast intellectual commons, nothing will ever again be out of print or impossible to find; every scrap of human culture transcribed, no matter how obscure or commercially successful, will be available to all’.\(^4\)

However, technology also presents a ‘danger’ for content producers. As the many users of Napster first demonstrated,\(^4\) copying material to a computer hard drive can be the first step in making content available for unauthorized distribution to any computer on the planet. Illegally distributed copies then may reasonably be expected to substitute for legal purchases, and to harm producer incentives in the process. Consequently, due account should therefore be taken of the differences between digital and analog private copying and a distinction should be made in certain respects between them.

The digital network can then be conceived of as a disk. Copyrighted material is transmitted between users through the interior, while material on the circumference moves to other devices using off-network operations. With some exceptions, transfers through the interior can be observed and measured, and are therefore conducive to licensing and sales. By contrast, transfers around the circumference are less easily discerned, and subject more readily to fair use and first sale considerations.

1.5 ORGANIZATION OF THE BOOK

The book is organized as follows. Chapter 2 reviews fair use, and suggests that the present legal regime provides a complex test that creates uneconomic
Introduction

uncertainty for producers of transformative works that imbue copyrighted works with entirely new meaning (e.g., through satire, lecture, critical narrative and parody). Distinguished from superseding and derivative infringements that displace original sales and disrupt the coordination of sequential releases (e.g., books, screenplays), transformative works are seen as spinoff activities that are unrelated to original creation or product development. The chapter contends that courts can improve certainty by more precisely defining such transformative uses, and implementing liability rules to compensate rights owners for actual damages or reasonable royalties.

Chapter 3 considers the economics of digital rights management (DRM), which entails technologies for securing and widening the property rights that original owners may have over content distributed on the Internet. Digital rights management encourages production by improving security and widening the range of consumer choices. Accordingly, protections in the Digital Millenium Copyright Act that outlaw devices to circumvent DRM have a reasonable economic basis.

Chapter 4 considers the issues of contributory infringement and file-sharing, as heard in litigation involving Napster, Madster, Grokster and Morpheus. Courts are found to have resolved Napster efficiently by imposing upon both sides the obligation to institute protections against later infringement, but declining otherwise to shut down Napster. However, ongoing industry litigation against subsequent file-sharing services may be ignoring the unpleasant market reality that more powerful file-sharing technology may follow if one is outlawed.

Chapter 5 discusses the problems of the anti-commons – overlapping and cumbersome rights – that inhere in the market for digitally transmitted music. While the structure of copyright implicates a collection of rights that has some basis in analog law, the structure has less validity in digital markets. As a consequence of the administrative overlay, the resulting licensing arrangements for digital audio transmission are inefficient. The chapter suggests ways to improve economic efficiency by reducing the number of transactions and administrative reviews.

Chapter 6 considers the related topic of publicity rights, which extends to celebrities the rights to control how their names and images are used in media communications. The chapter concludes that celebrities need strong protection against impersonations and digital clones that can substitute for their professional performances. Additionally, producers cannot be permitted to expropriate celebrity names, nicknames and, possibly, phrases in a manner that could imply endorsement. Publicity rights in other respects, particularly with regard to mass merchandise, are found to be excessive. Publicity rights also present a concern for copyright owners, as the resulting regime may lead to another overgrowth in the anti-commons.
Chapter 7 considers economic issues related to software, data and cyber-search. Courts are found to have generously granted fair use protection to users of software interfaces, and to have ignored the potential for licensing arrangements or pricing adjustments to have resolved matters with less expropriation. Courts in both copyright and antitrust law have opposed a number of competitive business models in high-tech markets that actually benefit users and hasten the penetration of new platform technologies. Nonetheless, a case is made for fair use for some data spinoffs that do not affect primary incentives, and for consumer devices where the transactions costs of licensing in private homes may be prohibitive.

Chapter 8 considers the issue of open source software as an innovation in the power of IP protection. Open source software is seen as a highly functional adaptation of copyright law that may enhance cooperative production by reducing transaction costs and eliminating the threat of expropriation. The outcome is a system that greatly increases producer incentives to create in an accommodative and open-ended fashion.

NOTES

2. ‘Now known or later developed, from which they can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device’ (17 U.S.C. § 102).
3. Ibid.
4. 17 U.S.C. § 106. Also, in the case of sound recordings (otherwise unprotected in the performance right), to perform the work publicly by means of a digital audio transmission.
5. ‘The fair use of a copyrighted work … for purposes such as criticism, comment, news reporting, teaching … scholarship, or research, is not an infringement of copyright’ (17 U.S.C. § 107). The four statutory criteria for fair use are discussed in detail in Chapter 2.2.
6. For known works created after January 1, 1978, copyright endures for a term equal to 70 years after the death of the last surviving author (17 U.S.C. § 302(a)–(b)). For anonymous works, pseudonymous works and works made for hire, copyright endures for 95 years after first publication, or 120 years after creation, whichever expires first (17 U.S.C. § 302(c)).
7. Per full statutory wording, copyright protection does not extend to any ‘idea, procedure, process, system, method of operation, concept, principle, or discovery, regardless of the form in which it is described, explained, illustrated, or embodied in such work’ (17 U.S.C. § 102(b)).
8. The first sale doctrine extends to a lawful private owner the right to sell or otherwise dispose of a copyrighted work. This does not include the right to make reproductions (17 U.S.C. § 109(a)).
9. With restrictions, libraries may reproduce or distribute single copies of works to interested readers and requesting libraries, and up to three copies (including digital) for preservation of unpublished works or legitimate replacement or reformatting of published ones (so long as a replacement cannot otherwise be obtained at a fair market price) (17 U.S.C. § 108).
10. With restrictions, performances or displays of lawfully made works by instructors or pupils in the course of face-to-face teaching activities are copyright exempt, as are transmissions of non-dramatic literary or musical works. Performances of non-dramatic works are similarly exempt for religious services, non-profit establishments, small eating and drinking
establishments, government organizations, record stores or uses for the blind and handicapped (17 U.S.C. § 110).


14. Brief for G.A. Akerlof et al. as Amici Curiae, U.S. Court of Appeals for the D.C. Circuit, Eric Eldred v. John D. Ashcroft, May 20, 2002 (‘The main economic rationale for copyright is to supply a sufficient incentive for creation [and] an economically mindful author will recognize this and invest in creation only if the expected returns exceed the upfront investment. [However] without legal protection, an author cannot prevent others from appropriating the fruits of the initial investment’ at 4).

15. The Constitutional purpose of copyright is to ‘promote the progress of science and the useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries’ (U.S. Constitution, art. 1, § 8, cl. 8). The Supreme Court further affirmed: ‘The sole interest of the United States and the primary object in conferring the monopoly lie in the general benefits derived by the public from the labors of authors’ (Fox Film Corp. v. Doyal, 286 U.S. 123, 127–38 (1932); U.S. v. Paramount Pictures, 534 U.S. 131, 158, 68 S. Ct. 915, 92 L. Ed. 1260 (1948). The ‘economic philosophy behind [the Constitutional] clause … is the conviction that encourage of individual effort by personal gain is the best way to advance public welfare’ (Mazer v. Stein, 347 U.S. 201, 219, 74 S. Ct. 460, 471, 98 L. Ed. 930 (1954)).

16. In the continental approach, the ‘fruits of intellectual creativity are associated with the author in a peculiar intimate way’ (L. Weinreb, ‘Copyright for Functional Expression’, 111 Harvard Law Review, 1149, 1226 (1998)) and therefore implicate a property right to the product in a manner that may be independent of social utility (Bleistein v. Donaldson, 188 U.S. 239 (1903)).

17. Supra note 14, Section I.B.

18. Ibid., Section II. Economists believe that when market price is set equal to short-run marginal cost, an exchange will take place if and only if consumer value exceeds producer cost. This maximizes aggregate social welfare and is viewed as economically efficient.

19. Eldred v. Ashcroft 537 U.S. (2003). In dissent, Justice Breyer challenged the 7–2 majority regarding copyright, arguing that protection is constitutionally justified only in so far as it provides the incentive for new production. At II.C.


25. See Chapter 7, section 2.

26. Guido Calabresi (Second Circuit); Richard Posner, Frank Easterbrook (Seventh Circuit); Alex Kozinski (Ninth Circuit).


29. Continental TV, Inc. v. GTE Sylvania, Inc., 433 U.S. 36 (1978) (‘we are convinced that the need for clarification of the law in this area justifies reconsideration’ of Schwinn [infra note 32], at 47).


31. The 1960s economic ideology of the Supreme Court can be traced to legislative intent behind the Cellar-Kefauver Amendments to the Clayton Act, which were passed in 1950. (15 U.S.C. § 18). ‘Small, independent decentralized business of the kind that built up our country ... first, is fast disappearing, and second, is being made dependent upon monster concentration. It is very difficult now for the small business to compete against the financial, purchasing, and advertising power of mammoth corporations’ (95 Cong. Rec. 11484).

32. Brown Shoe Co. v. U.S., 370 U.S. 294, 315 (1962) (‘The dominant theme pervading Congressional consideration of the 1950 amendments was a fear of what was considered to be a rising tide of economic consideration in the American economy’); U.S. v. Philadelphia National Bank, 374 U.S. 321 (1963) (‘Intense Congressional concern with the trend toward concentration warrants dispensing, in certain cases, with elaborate proof of market structure, market behavior, or probable anticompetitive effects’ at 363); U.S. v. Arnold Schwinn & Co., 388 U.S. 365 (1967) (it was unreasonable for a manufacturer to ‘restrict and confine areas or persons with whom an article may be traded after the manufacturer has parted with dominion over it’ at 379). For condemning mergers where post-merger market shares were as low as 7.5 and 4.5 percent respectively, see U.S. v. Von’s Grocery Co., 384 U.S. 270 (1966) and U.S. v. Pabst Brewing Co. 384 U.S. 546 (1966).


37. Infra note 43.


43. For extensions to the political process, C.E. Lindblom, ‘The Science of Muddling Through’,
19 Public Administration Review 79 (1959). Lindblom compares incrementalism favorably with rational-comprehensive policy that is elegant but often impractical; rational comprehensive policy tries to consider and weigh all factors, gather all relevant information, measure all relevant quantities and willingly jump to extreme positions as logically justified. See generally, H. Simon, The Sciences of the Artificial (Cambridge, MA: MIT Press, 1996).
