

BOSTON UNIVERSITY SCHOOL OF LAW

WORKING PAPER SERIES, LAW AND ECONOMICS
WORKING PAPER NO. 03-10



CHAPTER 28: INTELLECTUAL PROPERTY

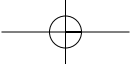
WENDY J. GORDON

This paper can be downloaded without charge at:

The Boston University School of Law Working Paper Series Index:
<http://www.bu.edu/law/faculty/papers>

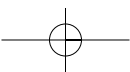
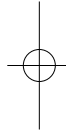
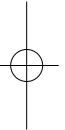
The Social Science Research Network Electronic Paper Collection:
http://ssrn.com/abstract_id=413001

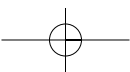
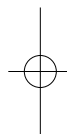
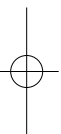
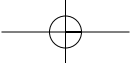
draft of Chapter 28 of THE OXFORD HANDBOOK OF LEGAL STUDIES, Oxford University Press,
edited by Peter Can and Mark Tushnet (October 2003)



P A R T V

TECHNOLOGY





CHAPTER 28

INTELLECTUAL
PROPERTY

WENDY J. GORDON

1 INTRODUCTION

1.1 Defining the Field

1.1.1 *Overview*

THIS chapter concerns a group of doctrines that bear a family relation to each other. Doctrines usually included under the rubric of 'Intellectual Property' (IP) include, among others, copyright, patent, trademark, trade secrecy, so-called 'moral' rights, rights in the topography of integrated circuits, rights in industrial design, plant breeder rights, rights of publicity, database rights, and rights against misappropriation. Not all nations recognize or enforce all the doctrines, but because of international obligations, most nations must recognize much of this list.

Each doctrine involves restraining people from using or duplicating a pattern that is owned by, or associated with, another party. The range of potentially covered

Copyright 2003 by Wendy Gordon. I thank Paula Baron, Robert Denicola, Estelle Derclaye, Rochelle Dreyfuss, Gail Evans, Mike Meurer, Malla Pollack, Richard Posner, David Vaver, and Richard Watt for generous suggestions, and Allan Axelrod for helping me to see that IP (and intentionality) is everywhere. Finally, I would like to express my appreciation to F. Scott Kieff who contributed substantial ideas and expression to my discussion of patent law. Responsibility for all error of course rests with me.

patterns is wide, including, for example, patterns in words, symbols, gene segments, the settings on computer switches, physical structures, processes, colors, and sounds. The patterns are thought of as valuable intangibles, capable of being embodied in, and replicated by, physical media.

There are five key parts to each such law. An IP law will specify the kinds of subject-matters (patterns) covered; it will define the nature of the restraints (rights) associated with the covered subject-matters and specify the corresponding remedies; it will state the criteria that give rise to ownership or other ability to assert the rights; it will specify privileges, limits, and defenses to the rights; and it will specify whether and how the rights and privileges are transferable.

1.1.2 *Can 'Intangible' or 'Intellectual' Serve as Unifying Concepts*

As noted, the conventional label for the field has become 'Intellectual Property', but the label is not fully accurate. One difficulty is that the label presumes that a 'thing' exists that can be owned. However, the 'thing' around which rights are organized in IP—the intangible product—is simply a conceptual construct. Most IP doctrines can be reconceptualized in ways that dispense with the notion of intangible 'things'. For example, instead of seeing trademark law as allocating rights in a 'thing' called a 'trademark', one can rather see trademark doctrines as an elaboration of rights against fraud. For another example, copyright law can be seen as a legal device that simply enables authors to charge different prices for identical copies (Gordon in Symposium on the Internet and Legal Theory, 1998). Another difficulty is that the term 'intellectual property' is drastically overbroad, for virtually any interest can be conceived of as a 'valuable intangible'. For example, a decrepit factory can, without causing any physical damage, injure the property values of its residential neighbor. The factory's ugliness is an 'intangible'—but that does not make zoning law a branch of IP.

The word 'intellectual' in 'intellectual property' does not only refer to the intangibility of the 'things' involved. The word 'intellectual' is usually taken to indicate that the patterns protected by IP doctrine have been produced by human mental activity. For example, the painter deliberately creates the patterns of brushwork and colors that make up the mural or portrait. Yet here, too, the language is deceptive, for in some IP fields it can be very hard to see the role of mental activity. For example, the 'right of publicity' attaches to famous faces—and although the celebrity's career may be a deliberate artefact, the face probably is not. Similarly, trademarks can be protected even if the companies using them did not originate them. For another example, many English-speaking nations give copyright or *sui generis* protection to databases that are a product more of physical than mental labor. Perhaps it would be better to say that the 'intellectual' component can be either in the mode of creation, or in the way that product is used.

Such an alternative formulation has possibilities: after all, the celebrity face, the trademark, and the database can all serve as sources of meaning or information. However, although that approach to definition has the merit of embracing more IP doctrines, it has the vice of over-breadth. All things can be invested with meaning, and even the most

physical of values may depend on knowledge (e.g. water increases in value once we know that water is for drinking). If 'intellectual' refers to the fact that some aspect of creation, distribution, or use employs the mental faculty, virtually nothing would be excluded.

1.1.3 *Is it 'Property'?*

The 'property' portion of the 'intellectual property' label has caused practical as well as conceptual difficulties. Too many courts have assumed that all things called 'property' should be treated similarly, ignoring the important physical, institutional, and statutory differences that distinguish intellectual 'property' from the tangible kind. For example, it has become standard in the study of IP to note that patent and copyright reflect a *balance* between two effects on society: (1) providing incentives to authors and inventors, and (2) providing access to the members of the public, both as consumers and as potential new authors and inventors who need to copy in order to implement their own creativity and skill. The first goal (incentives) is served by giving rights to IP proprietors. The second goal (access) is served by giving liberties to the public, which involves limiting IP owners' rights in ways quite foreign to ordinary property. Yet those limits are as crucial to IP as are the rights that IP grants. (Or at least the limits should be as important. The dynamics of public choice sometimes result in special interests having a greater impact on IP legislation than does the interest of the general public (see Litman, 2001).)

Another difficulty with the 'property' label is that, even more obviously than with ordinary property, the essence of IP law is person-to-person, not person-to-thing. This relational focus might have been better captured by the label that the US bar employed for the field during the first half of the last century, 'unfair competition'. In my view, that was a better phrase (albeit still imperfect) to unite the various doctrines. The core and most justifiable part of the essence of the IP cause of action is to restrain some act of duplication or free riding that, if widespread, would be wrongful ('unfair') because it is immoral and/or economically costly. Economic cost in IP usually stems from the danger that free riding will cause a loss of incentives, leading to under-production, or from the danger that fraud and confusion will result from too many entities using the same symbol. However, 'unfair competition', too, is inadequate as a label.

Most obviously, it is misleading as a descriptive matter. IP owners today have rights against persons who are neither competitors nor cause effects like those caused by competitors. It is even a bit misleading to use 'unfair competition' as a normative model. That is because competitors are not the only persons who can use strangers' patterns in ways that have deleterious social effects.

Today, the phrase 'unfair competition' tends to be reserved for a particular subset of IP causes of action, particularly passing off (the tort of mislabeling one's goods to deceive consumers into thinking they are made by someone else, a tort recognized historically in virtually all countries) and misappropriation (a controversial tort recognized by some state jurisdictions in the United States). Passing off and misappropriation typically require a plaintiff to prove that a defendant's behavior is of a type likely to cause harm to the public (e.g. is likely to confuse, or likely to leave the

plaintiff's customers without a source for the contested good or service). By contrast, neither copyright nor patent law requires proprietors in the ordinary case to offer proof that the defendant's behavior will be socially harmful. (In fact, copyright and patent typically allow proprietors to succeed even if they can show no *private* harm.)

As mentioned, many subfields in IP require judges to impose liability without allowing inquiry into whether granting the relief sought by the plaintiff will further the public interest. This, too, is characteristic of 'property'. Whether rooted in a belief that owners' pursuit of their self-interest can serve the public good, in an esteem for owners' autonomy interests, or in a desire to increase certainty and decrease litigation costs, causes of action of the property type usually require a judge to defer to an owner's will. By contrast, the approach found in 'unfair competition' was conditional. With a conditional right, the plaintiff can prevail only by proving some fact (such as likelihood of confusion, still used today in traditional trademark actions) that the doctrine takes to indicate that a plaintiff's victory would serve the public interest.

There are some economic advantages to rejecting conditional approaches and instead choosing deference to an owner. For example, the deference that is characteristic of 'property' can simplify administration, make use of decentralized information via pricing signals, and decrease the transaction costs involved in disseminating works. Some markets may well be 'perfect' enough to allow the Invisible Hand to guide owners to serve the public interest while pursuing private gain. Therefore, so long as the subject-matters protected by IP were narrowly defined, and the scope of rights were also narrow, the benefits of using the 'property' formulation clearly outweighed the costs. That is because the narrow definitions made it likely that any prima-facie violation of the IP right would also be an act that hurt the public. Dispensing with the need for a plaintiff to show a particularized personal or social harm reduced the cost of adjudication, increased certainty, and made it easier to buy and sell rights—and, so long as the IP was sufficiently narrow, may have done so without significantly chilling the socially desirable use of created works by third parties.

However, over the years, the definitions of both subject-matters and protectable rights have expanded. (For example, under early copyright statutes, the proprietor typically had rights only against slavish duplication and sale of the copyrighted manuscript. She had no right to veto, for example, a creative adaptation of her work that served a different market. By contrast, today a copyright proprietor's rights extend over creative uses that others may wish to make of her work.) With this expansion, a lack of fit between private and public interest has become increasingly likely to occur in given IP cases.

At least, so is the view of this writer, and of the growing academic consensus. Various devices exist to ameliorate this situation. More IP rights could be put into a conditional form, such as 'unfair competition', where the plaintiff would have to show some indicia that the public interest would be served by stopping the defendant's behavior, or making the defendant pay. Another possibility is to retain the property form, but alter its remedies, perhaps eliminating injunctions in a significant class of cases (Reichman in Dreyfuss *et al.*, 2001; on separating the inquiries into behavior and compensation, see Gordon in Elkin-Koren and Netanel, 2002). There

are many ways in which the scope and subject-matter of IP could be trimmed back to a narrower and more easily justifiable compass.

As mentioned, one salient alternative might be to modify the strict property form with procedures or defenses that make IP rights more conditional. The US defense of 'fair use' is one such possibility. It can be employed as a sorting device. When the defendant cannot plausibly claim fair use, that may indicate that her case can safely be decided via formal deference to an owner. When by contrast, the defendant can make out a plausible fair use claim, that may be a case worth the high cost of a judge doing a case-by-case, fact-intensive evaluation of whether the defendant's use should go forward. Such defenses can be structured so that the defendant has to make some special showing to trigger their application, thus potentially reserving the complexity of non-property conditional inquiry to a manageable subset of cases.

Copyright and patent are unlike ordinary tangible property in a number of ways. From an economic perspective, the subject-matters of copyright and patent are more like inexhaustible 'public goods' that are ordinarily un-owned, than they are like exhaustible 'private goods'. Further, there are both personal and public interest components to many IP doctrines, leading the law to give less market control to 'owners' than to most owners of ordinary tangible property. However, over time, IP is becoming more like ordinary tangible property.

Constraining the growth of IP is conceptually attractive but politically difficult, in part because of international agreements and industry pressures, and in part because, ironically, the 'property' label itself seems to reassure some judges and legislators that the expansions in IP have legitimacy. Nevertheless, serving the public good by constraining IP is a fruitful area in which much scholarly work is being done, particularly under the rubrics of expanding the public domain, and investigating the possibilities of commons-based institutions.

In sum: although copyright and patent do not require proof in *individual* cases that the defendant has done harm or behaved badly, the rationales typically given to justify copyright, patent, and most of the other IP doctrines are the same as those underlying 'unfair competition', namely, a desire to restrain behavior that is either immoral or likely to damage the public. Under the rubric of 'Intellectual Property', unfortunately, the grant of rights often outruns its rationale.

1.1.4 *Is Similitude the Key to IP?*

As a penultimate try at unifying the field, I will return to the notion of 'pattern' with which this chapter began, and suggest that IP concerns *similitude among patterns*. (Instead of 'similitude', one could say 'resemblance' or 'likeness'. The central conception of similitude is the quality of two things being identical or similar in essential respects, either in function or as perceived.) Plaintiffs in a trademark, copyright, patent, right of publicity suit are usually suing because someone has made, sold, or employed a pattern that in essential ways is *similar to* something the plaintiffs made or something associated with them.

'Similitude' is hardly a perfect unifier. First, similitude serves different functions as one travels from doctrine to doctrine. Secondly, not all the branches of IP require

a showing of similitude; notably, 'moral rights' can be concerned with protecting original paintings and sculptures from distortion. In the European countries where moral rights originated, however, moral rights extend to distorted copies (similitudes) as well. Moreover, as the scope of IP rights expands (particularly in copyright and rights of publicity), the test for infringement threatens to go far beyond similitude. Suits have been successful because the defendant has done something that could *remind* the audience of plaintiff, or had the same *concept and feel* as what plaintiff made, or somehow borrowed a luster associated with plaintiff. Nevertheless, I suggest it is the role of similitude that has led the courts and the academy to see the various doctrines now known as Intellectual Property as belonging together.

1.1.5 *Externalities: The Beneficial and Harmful Effects one Causes without Experiencing*

A final unifying concept remains to be considered: the notion of 'externality'. Those effects that flow from an act that do not affect the actor herself are said to be 'external' to her. An effect becomes 'internal' when law (or the law of nature) brings the impact to bear on an actor who had a role in causing it.

The externality notion is applicable to that subset of IP concerned with copying. This subset comprises the largest part of IP. For example, a copyright suit can be won only if copying is proved, and even in patent and trademark suits—where coincidental similitude can give rise to liability—many important cases involve copying. To copy is to reap a benefit from the efforts of the person copied. Thus, most of IP law is concerned with internalizing positive externalities: when someone copies or adapts a book or invention without paying the originator, the benefit remains 'external' to the originator and is thus unlikely to affect her incentives. When IP requires the copier or adapter to pay, part of the benefit is 'internalized' to the originator.

In this respect, IP can be visualized as tort law turned upside down: ordinary tort law, governing unintentional injury, encourages persons to take precautions by making them bear some of the costs their risky behavior imposes on others. IP law encourages persons to become more productive by allowing them to capture some of the benefits their useful behavior gives to others. Thus, just as ordinary accident law internalizes negative externalities to discourage carelessness, IP law internalizes positive externalities to encourage productivity.

However, note an important caveat: no one would suggest that IP should internalize *all* the benefits that flow from an intangible. For example, imagine how odd the world would be if a young person had to pay the authors of his textbooks for all the benefits that, over a lifetime, the books generated for him. Therefore, 'externality' merely provides a mode for beginning one's analysis, and does not provide a self-defining answer to how far IP should extend. Among other things, IP must be as concerned with the follow-on innovator as with originators. In the year 2003, every originator is a borrower as well. Many IP doctrines recognize this need to serve new

generations, and accommodate it by techniques such as limiting the duration of the copyright or patent term, limiting the scope of rights, or shielding some subject-matters from ownership. (To illustrate the latter technique, readers are free to build upon the ideas they learn in copyrighted books because ‘expression’ but not ‘ideas’ can be owned under copyright law.) As in accident law, a careless pedestrian can ‘cause’ an accident, a copier or adapter of someone else’s work can ‘cause’ benefits to arise for the public. Both plaintiff and defendant need to bear and capture some of the costs and benefits of their activities.

1.2 Implications of the Doctrinal Divisions

Just as there is dispute on how to characterize the field, there is a great deal of interpenetration among the categories. For example, analogies from trademark law have helped expand the right of publicity, and once the right of publicity was established, lawyers representing plaintiffs in trademark cases used analogy to borrow some attributes from the new right of publicity to expand trademark law further (Denicola, 1994, esp. 617–27).

Scholars dispute not only the normative basis of the various doctrines (morality and natural law? consequentialism? consistency?), but also the boundaries between doctrines (both patent and copyright can cover aspects of computer programs), the institutional tools in which the various doctrines are instantiated (property rights? personal rights? conditional tort rights?), and the institutional sources (judges? legislatures? constitutions? custom?) that are best suited to create IP rights.

The battle of labels is oddly important, since the increased economic importance of intellectual products has made the scope of IP a major political issue. The ‘property’ analogy helps the law of IP expand much as, in earlier days, the more pejorative but equally descriptive label ‘monopoly’ helped keep IP from expanding. Behind the labels are some obvious functional queries. The debate over ‘property’ versus ‘tort’ usually centers on the extent to which an IP ‘owner’ can sue to restrain or obtain compensation for a non-harmful use. (Since free riding by definition always creates *some* benefit—someone is getting a ride, after all—the question of whether an IP plaintiff need prove harm can be an essential issue.) The debate over ‘personal’ versus ‘property’ characteristics usually centers on the question of whether a given right is waivable, alienable, or descendible/heritable. And so on. Despite a century of Legal Realism, the functional issues are often obscured by labels.

1.3 Overview of Developments in IP Theory

It is often said that on the European Continent, IP is perceived as having its roots in natural law and natural right, while in Anglo-American jurisdictions the basis of IP

is utilitarian (Kase, 1967). For example, the dominance of consequentialist reasoning in the United States is indicated by the language of the constitutional clause authorizing Congress to grant copyrights and patents: 'To promote the Progress of Science and the useful Arts' (art. I, cl. 8, para. 8). Nevertheless, intimations of both rights-based and utility-based claims can be found in most countries. For example, both rights-types of analysis and consequentialist forms of analysis can be found in the revolutionary settings of both the United States and France (Ginsburg, 1990).

IP theorizing was sparse in legal academia until the second half of the twentieth century. Despite an occasional lapse into illogic on the part of courts and legislatures, theorizing on intellectual property law has flowered as IP has become more economically important. So far, the theoretical approaches have derived largely from the models used for analyzing the common law. Theories of torts (involving physical harms), property (of the tangible type), and restitution (unjust enrichment) have been extended into IP, with useful results.

The most profitable lines of analysis for copyright and patent have been drawn from economics, where the most influential writing has so far come out of the United States. However, the US law and economics movement has tended to take a pro-property position. It is only recently that the economic virtues of common ownership have begun to be explored there, by scholars such as Benkler (2002), Eisenberg (in Dreyfuss *et al.*, 2001), and Rose (1998). Much of the literature exploring the virtues of common ownership for IP has come from Australia and Canada (see Drahos, 'Introduction', and articles by Mandeville and others in Drahos, 1999, and Coombe, forthcoming). However, with the formalization of the 'anti-commons' model the United States is catching up. See, for example, Heller and Eisenberg (1998).

On the philosophical side, theories developed from a Lockean base have been the most influential in IP. John Locke argued that persons who mixed their labor with an object from the common—such as someone who caught a fish, or picked an apple from a wild apple tree—should have property in it, subject to the proviso that the person seeking property has left 'enough, and as good' in the common for others to use. Lockean theory has been used as a basis for 'justifying' IP and, via the Lockean proviso, as a basis for curtailing its reach (Drahos, 1996; Gordon, 1993; Hettinger in Drahos, 1999).

For example, some have questioned the fairness of the rule adopted by most countries that gives patent owners the power to enjoin even coincidental and independent invention. Yet 'fairness' is a slippery concept. The Lockean proviso provides one fruitful logic for examining this aspect of patent doctrine. When a patent owner is entitled to restrain a third party who happens to have independently duplicated his work, the restraint leaves the third party without 'enough and as good'. Therefore if the patent rule is to be justified in fairness terms, investigation is needed into whether there is empirical support for alternative formulations of fairness, such as whether all persons involved in a patent race consent to the winner-take-all patent system—or, perhaps, whether the short duration of patents suffices to keep 'enough, and as good' for the re-inventor (Sherman and Bently, 1999; Gordon, 1993).

Lockean

For a potential application of the Lockean proviso drawn from copyright, consider an influential work of authorship that has deeply affected its audience. A broad copyright law could give that work's author the power to restrain new authors who are hostile to the first work's point of view from making substantial but necessary quotation from that first work. Such suppression could leave persons affected by the first work worse off than they would have been had they never seen the first work. This harms them, and violates the essential equality that the proviso seeks to protect. Accordingly, the hostile use of the first work should be permitted (either by employing a doctrine of 'fair use' or 'fair dealing', or by limiting the first author's prima-facie claim rights), lest second comers lack tools to deal with their culture that are 'enough, and as good' as the tools the first author had at her disposal.

A difficulty with Locke's argument is that it focuses on 'labor', and many of the IP doctrines distinguish between (1) physical work and mental work, and between (2) creative mental work and merely arduous mental work. Although countries and doctrines differ on the importance of the 'kind' of labor employed, and modern IP law sometimes seeks to look at the created 'thing' separately from the process that brought it forth, it is clear that the kind of labor or creativity often matters a great deal (Sherman and Bentley, 1999). Locke's philosophy does not readily explain why the type of labor should matter.

Economics does not provide a ready explanation either. Goods produced by both physical and mental labor, and by both creative and non-creative mental labor, can suffer from public-goods-type fencing difficulties. (For example, even a non-creative database can be cheaply copied, as can a non-creative layout of type on a page, or a restored movie.) Nevertheless, nations typically reserve the initial grant of IP rights to products involving at least some mental labor, and some doctrines and nations give greater protection to the creative and inventive.

To explain the dominance of this trend, and the fact that most observers are more comfortable with 'property'-like protection for intangibles tinged with personality, one explanation might be technological history: most physical work, such as laying out type, did not become open to free riding until recently. (In prior centuries, each typesetter had to set his own type; today, a typeset manuscript can be quickly scanned into a computer and duplicated.) However, more than path dependence may be at work. For investigation of whether and how the 'personal' element *should* be important, we probably should look to sources such as Hegelian and Kantian philosophy. At least in the English-speaking world, although some valuable work has been done (see Drahos, 1996; Hughes, 1998), application of those schools of thought to IP is still at an early stage. Another possible explanation for the respect given the 'personal' may be a romantic vision of authorship that understates the author's need to use and build upon her predecessors (Boyle, 1996) (criticizing the notion of romantic authorship). Nevertheless, all accounts that lay stress upon the 'personal' element have to face the awkward fact that most copyrights and patents are owned not by the authors and inventors, but by their employers or assignees.

Some work has been done on the basic question of when and whether products of the mind should be commodified (Elkin-Koren and Netanel, 2002). The empirical fact that something has value too often leads judges and lawgivers to give it property status. Property need not and should not automatically flow from value (Dreyfuss, 1990). There are many reasons for this—notably, privatizing individual value flows can threaten a larger but less-appropriable stream of social value (Drahos, see e.g., ‘Introduction’, in Drahos, 1996).

The commodification literature can be helpful with this basic issue. For example, many of the policies that counsel against making body parts alienable also help explain the copyright policy that allows people to use the ideas they may have integrated into their thinking as a result of reading others’ work. Ideas of human dignity have played a role in the disputes over the patenting of gene sequences, and the issue of patenting genetically altered mice and other live beings. They may also play a role in the special devices that many nations embed in their statutes for protecting authors as against the publishers and entrepreneurs who exploit their work, such as the non-waivable right of termination that the United States gives all authors outside the work-for-hire context or the Canadian right of reversion. (See Cornish, 2002 (overview of the publisher-author issue, including treatment in France and Germany); also see Hansmann and Santilli in Towse and Holzhauser, 2002, vol. 1 (arguing that giving artists non-waivable, inalienable moral rights to safeguard their work’s integrity can also serve the public’s economic interest).)

Similarly, IP ramifications arise out of the familiar commodification debates about whether it is better to identify distinct ‘spheres’ of activity (or distinct types of goods) that should be segregated from the market, or whether all activities and all goods could in some contexts benefit from non-market treatment. The ‘sphere’ approach supports using bright line tests such as excluding certain intangibles from possible ownership, while the contextual approach supports using flexible devices such as ‘fair use’. Nevertheless, as with the anti-commons in economics, the anti-commodification arguments and their application to IP are still in a fairly early stage of development.

Another area that is attracting study, but needs much more development, is the study of what kinds of environment foster the best and most diverse creative work. Most of the valuable work is likely to come from social psychologists. Consider, for example, the work of Theresa Amabile and colleagues (1996). Their experiments tentatively suggest that it is intrinsic motivation that makes for the best creative work, as opposed to extrinsic motivators such as money. How should that possibility influence our view of the extrinsic motivator that IP provides? One implication may be remedial: a full property right, complete with injunction, may feel more natural to artists, and thus less extrinsic, than would a remedy limited to monetary relief. Amabile herself admits the tentative nature of her research, and although a great deal of work is done on the psychology of creativity, more of it should be aimed at discovering how law can (or cannot) be of assistance. One complicating difficulty is the fact

VOL.
I

^{many} that many of the actors in the IP field are corporations and persons with purely business motives.

Meanwhile, as intimated, international developments and industry pressures move ahead of sound theorizing. Increased protection is being mandated virtually everywhere. This pro-property movement has created two major problems that cut across virtually all areas of IP (copyright, patent, trade secret, and so on): developing nations (Reichman in Towse and Holzhauser, 2002; and Braga in *ibid.*), and public domain (Boyle, 1996; Lange in Drahos, 1999).

Regarding developing nations, most observers agree that Third World populations need both access to technology, and some ability to control and profit from their ecological and cultural assets. As for the first issue, the most prominent debate is on reasonably priced access to AIDS drugs. As for the second issue, much debate concerns issues of legal technique: how can a nation exclude outsiders from its treasures of communally developed age-old medical and cultural information, particularly given the individualistic bent and limited duration of Western models of IP.

In developed nations, the converse problem appears: the need to keep a strong public domain. There is an ironic tension between the two problems: for distributive justice reasons, many favor the developing nations keeping control over their assets, but these may be the same assets that in developed nations need to be kept free for all to use. So far, the conflict has been under-theorized, with the same scholars favoring both results without addressing the contradiction (Boyle, 1996). Part of the solution may lie in the anthropology of groups: sharing *within* a group has different implications than sharing *outside* it. Rose (1998) calls this 'limited common property'. Part of the difficulty is the tension between group and national claims of distributive justice, and individual claims of corrective justice.

Another important issue is 'fit' with free speech principles. In the United States through the First Amendment and in England and many Commonwealth countries through the Declaration of Human Rights, free speech has the potential to trump IP rights. Whether or not that potential can be fulfilled is a subject of much debate and, in the United States, recent litigation. Ironically, although publishers in England initially obtained functional protection against copyists by serving the Crown's desire for censorship, copyright came to maturity in the first copyright statute as opposed to censorship (Patterson in Drahos, 1999).

IP law is not the only mode of excluding non-payers from creative products. Locked drawers and drawn curtains can do so as well, just as sometimes the practicalities of production can give a first comer a substantial lead-time advantage over potential copyists (Breyer in Towse and Holzhauser, 2002). While tangible space has always provided some modes of excluding non-payers, Lessig (1999) has suggested that the architecture of cyberspace is uniquely controllable. For example, the law will never face the issue of whether public policy supports giving the public a right to read and copy a particular work if the work is so encrypted that the affected public does not know enough about what is behind the barrier to challenge it. Much

put
para
break
here
ONLY

argument suggests that we need to import public policy—for example, providing access to ideas, avoiding unconscionability, fostering fair use—into the regulation of privately developed computer code, and into the way our courts enforce shrinkwrap and Internet contracts (Fisher in Symposium on the Internet and Legal Theory, 1998). However, the legislatures have so far tended to go in the opposite direction, enacting legal prohibitions to discourage hacking and encourage acceptance of encryption.

The next section of the chapter describes the primary areas of IP. It is followed by an outline of some of the dominant economic approaches, as economics provides the most developed line of systematic scholarship thus far.

2 IP SUBSTANCE: OVERVIEW OF PARTICULAR DOCTRINES

As mentioned above, the various doctrines of IP have at most a ‘family resemblance’, in Wittgenstein’s sense: no one defining characteristic is necessary or sufficient for making something ‘intellectual property’, but there will be many common characteristics between any two of the doctrines, and when the group is viewed together a family resemblance may be perceived. For example, copyright and rights of publicity involve free riding, that is, copying. By contrast, a patent or a trademark can be infringed even by someone who has not copied. (Nevertheless, the ordinary patent and trademark case probably involves copying.) In the United States, copyright and patent are alike in protecting products that result from some intellectual (more than merely laborious) effort, while in the Commonwealth nations the ‘originality’ needed for copyright may be sufficiently provided by sweat of the brow. There are other exceptions to the apparent importance of ‘intellectual’ content to ‘intellectual property’. Notably, database rights in the European Union attach to labor and funds invested independently of creativity; trademark law requires neither intellectuality nor originality in choosing or devising a mark; and trade secrecy can protect even the most routine of productions, such as lists of customers.

As a matter of positive law, sources of Intellectual Property rights (IPRs) vary from country to country and from doctrine to doctrine. In the United States, for example, copyright and patent are federal and statutory, the right of publicity is state-based and most often judicially created, and trademark law is oddly ubiquitous: concurrently state and federal, judicial and statutory. In Europe, complexity is similar. For example, a trademark can be registered in a particular nation, in the EU, or both. Not only may local, national, and EU law and administrative bodies have an impact on

European IP rights, but also aspects of the Declaration of Human Rights—such as its protection for free speech—can play a role.

Copyright, patent, and trademark laws constitute the three main areas of IP. It will be useful to highlight some of the similarities and differences among them, and to mention some of the other areas where IPRs appear.

Copyright subsists in any work of original authorship once the work is fixed in a tangible medium of expression. (This is US language, but generally applicable in English-speaking countries. Other countries may not require fixation as a pre-requisite.) When someone writes a letter, takes a photograph, or makes a record of her band playing an old folk tune, she has a copyright. Prior to 1978, federal copyright in the United States applied only when an author had complied with particular formalities, but with the US desire to join the primary international convention on copyright, the Berne Convention, the US approach began to de-emphasize formalities.

Some creative efforts do not result in a copyright, or the copyright does not apply to all aspects of what has been created. For example, a book may contain original ideas or facts that the author has discovered by diligent and imaginative research, but ideas and facts are not usually copyrightable. (The UK is more generous to uncreative compilers than is the [§]United States, however.) Short words or phrases are typically too trivial to be 'works of authorship', although if they serve to indicate a product's source they can be protected under trademark law. Perhaps the most contested limit on copyrightability has to do with attractive designs of useful objects (attractive bicycle racks, lamp bases, plastic copies of sculpted torsos used as fashion mannequins). Countries have widely varying approaches to design protection. Ordinarily, copyright law will have various limits to cabin the extent to which useful designs can be monopolized under its protection. This occurs because virtually all nations try to keep a border between patent law, which gives hard-to-achieve and short-lived protection to functional inventions, and copyright law, which gives easy-to-obtain and long-lived protection to works of expression. facts

This is related to the more general issue of how to provide appropriate but not over-large incentives for sub-patentable invention (Reichman in Dreyfuss *et al.*, 2001). Many countries are more hospitable to industrial design and sub-patentable invention than is the United States. Sherman and Bently (1999) suggest that, in Britain, design protection came to maturity early, as its own category and not as a hybrid between copyright and patent.

The United States is a dominant exporter of copyrighted works, but until recently viewed copyright as a dangerous incursion on public right, justifiable only to the extent that it served the public benefit, and to be narrowly construed. At least, that was how the law seemed to operate. For example, unless copyright notices of a particular type were attached to works when published, the work went into the public domain. Even today, a defendant in the United States can defeat a copyright suit by proving that the plaintiff's work was publicly distributed without notice before March 1989. As the United States abandoned formalities to come into compliance

with the Berne Convention, the question has been raised whether it has also come to adopt some of the 'authors' rights' or 'natural rights' conceptions which have been particularly popular on the Continent.

Most copyrights last for the life of the author plus some number of years, usually fifty or seventy. After that time, the entire public shares the liberty to use the copyrighted work. Duration in virtually all countries has continually increased via legislation, and many debates currently focus on the wisdom and constitutionality of those extensions (Vaver, 2000).

During the 'copyright term' (i.e. the period during which a copyright is still valid), the copyright owner can obtain damages from, and enjoin, anyone who violates one or more of her exclusive rights. Many nations in their copyright acts give different rights to different kinds of works. For example, in the United States, 'musical works' (compositions) are a kind of subject-matter that has more rights than do 'sound recordings' (the sounds produced by singer and orchestra). Similarly, most nations have exceptions that favor particular industries. Some commentators, most notably Litman (2001) in the United States, have examined the public-choice dimension of copyright legislation, noting that the major players tend to be industries who obtain narrowly worded exceptions to protect themselves, leaving the public's liberty insufficiently protected.

Most copyright owners have exclusive rights over reproduction, public performance, public display, distribution, and the making of derivative works. In all cases, the plaintiff will have to prove that the defendant copied from the copyrighted material in a way that is qualitatively or quantitatively substantial. That is, copyright is only valid against those who 'free ride', and not against fully independent creators. In the United States, it is not an infringement to make a 'fair use' of copyrighted material, and what constitutes a 'fair use' is much debated. One interpretation sees 'fair use' as a response to occasions when the market may fail to serve social goals because, for example, significant transaction costs prevent desirable transactions or because non-monetizable interests are at stake (Gordon in Towse and Holzhauser, 2002, vol. 1). Other nations have more limited 'fair dealing' privileges, restricted to special types of dealing, such as research or criticism.

Copyrights can be bought, sold, licensed, subdivided, and inherited. There are limits on the freedom of disposition, however. For example, as mentioned above, both the United States and Canada give authors (not in a work-for-hire situation) rights to recapture copyrights they have assigned away. The Canadian right is automatic, and is triggered twenty-five years after the author's death. The US right has to be actively exercised, and is available much earlier. Both countries limit the author's ability to divest herself of this right.

Conflicts can arise requiring a choice of law. This is obvious when cyberspace crosses national boundaries. Jurisdictional issues, and issues of legitimacy, can arise within nations as well: for example, because of conflicts between layers of a federal state, or (in common law countries) between enacted legislation and common law.

In the United States, federal law will *pre-empt* state attempts to give subject-matter covered by the federal copyright statute rights equivalent to what the federal copyright statute grants. Thus, for example, pre-emption would invalidate a state law that tried to give the books written by resident authors a perpetual right against copying.

Probably the most important practical issue of the current day is private copying and copying for educational use (Litman, 2001). For example, to what extent should copyright liability attach to activities such as viewing a copyrighted work on the Internet, privately trading MP3 music files, videotaping movies, or photocopying? Some countries have established compulsory licenses for some of these uses. Others have turned to technological **strategies**, such as requiring that electronic devices be built in ways that inhibit copying, or giving copyright owners legal rights to discourage hackers from bypassing cryptography and other forms of electronic fencing. **Other crucial issues are** the potential conflict between copyright and free speech, and the extent to which copyright should be applicable to *standards* in computer software and elsewhere. Disciplines brought to bear on these issues include, for example, the economics of network effects, philosophies of commodification, and contested notions of human flourishing. For a guide to the law and society literature, see Coombe (forthcoming).

Patents are granted only to inventions that make some advance over prior art. There are several categories of patents, such as design patents intended for items that are ornamental rather than useful, and plant patents (see Reichman in Dreyfuss *et al.*, 2001). Most scholarly attention, however, is given to utility patents as the most economically significant category. (When this chapter uses the term 'patent', it generally will be referring to utility patents.) Issues here include matters such as the proper length of patent terms (David and Olsen and other works in Towse and Holzhauser, 2002, vol. 2), how to encourage follow-on innovation (see Scotchmer in *ibid.*), the scope of the patent right (see Merges and Nelson in *ibid.*), and whether first-to-invent or first-to-file should obtain patents.

In virtually all countries, to obtain a patent, it is not enough to have a breakthrough. No matter how meritorious one's invention might be, the inventor cannot obtain a patent unless she applies for one in a timely manner. This is quite different from the majority rule in copyright law, for a copyright arises automatically and is valid even if not registered with the applicable office.

Drafting patent claims is a demanding skill. In most nations, the examination process is costly (largely in attorney fees), cumbersome, and lengthy. Some applications are denied, often on the ground that the proffered inventions are not 'novel' or do not constitute a 'non-obvious' advance over the prior art. In many nations, even patents that are granted are likely to be invalidated by the courts. Some interesting statistical work has investigated the workings of patent systems (Lemley in Towse and Holzhauser, 2002, vol. 3).

There are several incentive-based theories underlying the patent system's grant to the patent applicant of the right to exclude others from practicing her invention if she

can show that her invention satisfies the conditions for patentability. These include theories based on the incentives to invent, disclose, design around, and organize post-inventive activity. For each of these theories, discussed immediately below, it is argued that the patent system provides some incentive that would be present at sub-optimal levels absent the patent system.

The incentive to invent theory suggests that a patent is granted to encourage invention. Under this theory, it is postulated that without the inducement of a patent, inventors might not invest sufficiently in the inventive process. One objection to this theory is that the incentive may be too great, resulting in an inefficiently high level of pre-inventive activity or an unnecessary deadweight loss during the patent grant. This theory also raises questions about how to measure what would constitute an appropriate incentive. Questions also persist as to whether alternative tools such as subsidies, cash prizes, reputational advantage, or tax credits might be better than, or reduce the need for, a patent system.

The incentive to disclose theory suggests that a patent is granted to encourage an enabling disclosure of the invention claimed in the patent. This is related to a notion of patent as 'bargain': the government gives the possibility of exclusivity and in exchange the patent applicant gives disclosure. This teaching function is achieved upon publication of the issued patent, which in most regimes takes about three years after the application is filed, or upon publication of the application itself, which in most situations occurs 18 months after filing. (In the United States, an inventor who chooses a US-only patent can avoid having the application made public until and unless the patent issues.)

The incentive to disclose theory rests on two primary assumptions. First, it assumes that, without patents, inventors could profit from their work while concealing the knowhow or other information necessary to the enterprise. This assumption has difficulties. For example, many inventions bear their techniques on their face, so that secrecy is impossible. (Consider, for example, the design of an innovative paper clip.) The second assumption on which the incentive to disclose theory rests is that a patent's enabling disclosure actually teaches. It has been argued that the enabling disclosure of the patent application is often not enabling at all. In addition, many inventors are driven by fame and other non-pecuniary rewards at least as much as by money, and thus even without a patent may already be sufficiently motivated to make their advances public.

The incentive to design around theory suggests there are advantages in encouraging competitors to circumvent a patent's scope by inventing substitutes. As the market for a patented product becomes increasingly tight, the patent provides an increasingly strong incentive for third parties to invent non-infringing substitutes, or even infringing improvements. It is a live question whether such secondary inventive activity involves primarily redundancy and waste, or whether on balance such secondary inventive activity may be desirable: a second-generation product may be better than the first, perhaps being cheaper, more effective, or having fewer or even different collateral costs or side-effects.

The primary theory that focuses on organizing post-inventive activity is called the prospect theory. Related theories focus on the incentive to invest, incentive to innovate, or incentive to commercialize. Such theories focus not on how to encourage initial invention but rather on how to make an invention practicable and useful—much as claim systems in mineral prospecting are concerned not with creating gold or silver but with coordinating its extraction (see Kitch in Towse and Holzhauser, 2002, vol. 2). The patent holder can centralize the exploitation and development of the prospect. Without the exclusivity and public announcement provided by a patent, the theory argues, wastefully duplicative expenditures could ensue. The patent also solves the Arrow paradox (the notion that without a legal right, inventors will fear disclosing their invention lest it be copied, yet may need to disclose in order to sell or license it). For the prospect theory, the signaling function of the patent is especially important. The ‘prospect’ notion suggests that with a patent’s issuance, venture capitalists, developers, advertisers, and product sellers can all begin to make the necessary investments to ensure that consumers will eventually be offered the invention’s commercial embodiment. The prospect theory and its cousins have their critics as well, of course. For example, it is sometimes argued that apparently duplicative expenditures on research and development (R&D) are more likely to produce useful variations than they are to be wasteful. (This is, in fact, an assumption underlying the incentive to invent around theory.) Further, even a patent does not allow coordination of all follow-on innovation. For example, since the holder of an ‘improvement patent’ can cross-license with an original patent holder, independent experimentation to refine an invention can prove profitable. Moreover, many legal regimes are explicitly concerned with giving incentives to ‘inventors’, rather than to the entrepreneurs who may make inventions more publicly available.

If the government issues a patent, in most nations it is valid for twenty years from the application date. (In the United States, for patents pending when TRIPs (Trade-Related Aspects of Intellectual Property Rights) went into effect, one can get the longer of the twenty years or seventeen from issuance. Most countries do not have the seventeen-year option.) After that time, the entire public shares a liberty to use the patented invention. Many Supreme Court cases in the United States have emphasized that the public’s liberty to share in an unpatented invention, or an invention whose patent has expired, is a crucial part of patent law.

During the period that a patent is valid, the patent owner can obtain damages from, and enjoin, anyone who makes, uses, sells or offers to sell or import into the United States a product or process that is covered by the patent claims, or that is considered equivalent thereto. It does not matter whether the identity between the patented and accused items results from copying or from coincidence, although many nations have a prior user defense that provides some shelter for prior and independent inventors. Nevertheless, in most if not all nations, an inventor who *independently* makes a product that duplicates the patented product cannot defend simply on the basis that he has not copied.

The usual justification for this is economic: given the high likelihood of parallel invention in the sciences, allowing an independent inventor to practice his invention will reduce the value of the patent 'prize' that is given to the winner of the patent race. (However, if the prize is small, innovation may not occur; if the prize is large, rent-seeking may erode the patent's value.)

Several aspects of patent law remain topics of debate. Some examples are discussed below.

- (a) Some see patents on processes to be too much of an impingement on personal liberty to do whatever one wants, but see patents on products as acceptable. Others see patents on products to be too much of an impingement on personal liberty to use whatever one wants, but see patents on processes to be acceptable. Manifestations of these debates appear, for example, in today's debates about whether patents should be allowed to cover medically important drugs and techniques, computer hardware and software, and business methods.
- (b) Often a company takes out patents for the sake of using them defensively in the event the company is itself sued for patent infringement. Some industry participants cooperate in 'patent pools'. Patents can be sold, licensed, and inherited. A plaintiff's 'misuse' of his patent is a defense to patent infringement in the United States and some other jurisdictions, and the nature of misuse is much debated.
- (c) In many countries, including the United States, patent law exists side by side with trade secrecy law. This complicates research on incentives: if the lure of one regime decreases, persons seeking exclusivity may turn to the other.

Trademarks are protected for their role in marketing, rather than for their creativity. Unlike copyrighted works, therefore, a trademark need not be a full 'work of authorship' and need not be original. Thus, for example, trademark status is available for short words and phrases and trivial graphics. All a trademark need do is identify a product, service, or company to the public. Nevertheless, there is some overlap between the doctrines of copyright and trademark. Both deal with communicative activity, so that disputes in each realm can implicate similar free speech principles. The overlap can also cause tension. The same cartoon or drawing can be both a copyrightable work of authorship, and, if the public recognizes it as a source-identifier, as a trademark. If the copyright goes into the public domain before the trademark loses its capacity to identify source, a court may have to choose which set of policies should have priority.

Many countries do not require that trademarks be registered as a prerequisite for validity, although registration can give definite advantages.

Sometimes the source-identifying nature of a word or symbol is obvious because it is inherently distinctive. Arbitrary words such as 'Kodak' are clearly there to serve a source-identifying function. If, by contrast, a word or phrase is descriptive of the product to which it is attached (consider 'Excellent' toiletries or 'Big Red' fire-trucks), the word or

phrase may be understood by the public as merely a piece of information regarding a product's quality or other characteristics. Therefore, descriptive words and symbols attain trademark status only after the public comes to understand the mark as indicating the source of the product. At that stage, a descriptive mark is said to have acquired 'secondary meaning'. Trademark proprietors can usually succeed in lawsuits only by showing that the defendant's use of the mark is likely to cause confusion in the marketplace. Suit in trademark law can be brought even if there is no copying. Coincidental duplication can confuse as much as intentional duplication does, and, as mentioned, the essential test for infringement is whether the accused use causes confusion.

Recently, there has been an additional cause of action available to 'famous' marks, and sometimes available even to those that are not famous: the right to prevent 'dilution' and 'tarnishment' of marks. Under 'anti-dilution' statutes, owners of famous marks can sue for unauthorized uses that 'dilute' the strength of the marks. Thus, for example, the company that markets Pillsbury baking products might sue under an anti-dilution cause of action if a magazine parody showed the 'Pillsbury dough boy' engaged in sexual activity. Anti-dilution, unlike ordinary trademark law, can be sued upon where there is no consumer confusion, and is of more doubtful legitimacy than ordinary trademark law.

Trademarks are typically words or symbols attached to goods. Often the phrase 'trademark law' is also used to embrace several related categories, such as 'trade dress' (which is the term for distinctive packaging or product design) and 'service marks' (which are applied to services). In all these instances, the marks, names, or designs primarily serve to identify the item's source to the public, and similar but not identical legal principles apply. In addition, marks can be used for certification purposes.

Trademarks can last as long as they retain their source-identifying function, which can be forever. The United States takes the position that when marks lose their source-identifying function in public discourse, exclusivity is lost. This happens, most notably, when a mark becomes 'generic': when people use a work as a generic term, they mean a kind of product rather than a source. 'Aspirin', 'cellophane', and 'linoleum' began as trademarks and are now generic.

Trademarks can be sold, licensed, inherited, and so on, so long as they are not separated from the goodwill they represent. The latter is an important qualification, at least under US law. To sell or license a trademark without an accompanying business, or at least a set of quality-control requirements, can invalidate the trademark. This is one of the main reasons why it is misleading to call trademarks a kind of 'property right'. Another reason is that trademarks could, traditionally, only be sued upon when they cause confusion, so that intentional use for a wide range of non-confusing purposes is not actionable.

Many practical and legal dilemmas arise out of the awkward intersection between trademarks and Internet domain names. In the 'real world' of ordinary streets, a hundred different enterprises can display the same or similar word as their trademark. So long as there is no confusion, there is no lawsuit, and there may be a large amount of

concurrent use. For example, the purchaser of an Apple record has no illusion that it comes from the same source that makes Apple computers. The purchaser of an Apple computer is similarly free of any belief that his computer comes from the record company. Therefore, both the record company and the computer company can have trademark rights in the word 'Apple'. However, the 'virtual world' of the Internet is not so flexible. There are relatively few high-level domains, such as '.com', '.edu' and '.org'. Although the number of high-level domain names is increasing, some have more market punch than others do. There can be only one 'Apple.[dot]com'. It has, and will probably continue to have, more punch than 'Apple.[dot]name'.

Cybersquatting can be seen as a branch of blackmail. Just as blackmail is illegal because it is wasteful to encourage people 'to dig up information just to bury it again' (Richard Epstein's wonderful phrase), it is wasteful to encourage people to purchase domain names just to sell them again. Also like blackmail, cybersquatting is a non-productive behavior aimed at extracting money, a form of preferring one's self over others rather than respecting their equality. When cybersquatting first appeared, courts sometimes stretched existing doctrine to find methods to restrain it. In the United States, cybersquatting has been made subject to a federal statute.

Rights of publicity are granted by many but not all states in the United States, and many but not all nations on the Continent and elsewhere. Typically, a celebrity who possesses a right of publicity can sue anyone who uses the celebrity's name or likeness in a commercial fashion. Rights of free expression raise intriguing questions in this context, and much controversy centers on whether a right of publicity should survive beyond the death of the famous person. In addition to covering name and likeness, the label 'right of publicity' is sometimes given to someone's claim of right over a performance. One such case involved a circus performer who made his living by being shot out of a cannon; he won a 'right of publicity' suit seeking damages—not an injunction—against a news station that broadcast his act in full.

Misappropriation is an unfair competition cause of action recognized by some but not all jurisdictions. Typically, the plaintiff must show that he made a substantial investment in creating an intangible product, that the defendant substantially appropriated it, and that the appropriation will harm the plaintiff and, if left unredressed, the public. Much debate centers on whether, to succeed in a misappropriation cause of action, the plaintiff must show that he and defendant are in competition. Only if the parties are in competition is there likely to be harm from the defendant's behavior, and public benefit from restraining the defendant. Sometimes the gravamen of the tort is described as 'reaping where one has not sown', as if free riding were itself wrongful. In that guise, misappropriation is inconsistent with the common law approach to restitution, under which it is ordinarily not actionable to reap a benefit. The tort of misappropriation often treads on the toes of copyright or patent (courting pre-emption or other invalidation), and its lack of clear boundaries poses great difficulties. The tort is thus controversial, with different nations and even different states within the United States coming to differing conclusions. One of the crucial

determinants is attitude toward judicial (rather than legislative) creation of IP rights. In Commonwealth countries, the tort of misappropriation is rejected.

Trade secrets developed by common law, and have also come to be recognized by statute in many jurisdictions. Essentially, if someone has commercially valuable information and takes reasonable steps to keep it secret, and it *is* secret, the state will assist that entity in preserving the secrecy against improper behavior. For example, imagine that third parties bribe the employee of a soft-drink company to give them the company's secret recipe. The company can use trade secret law to stop the third parties from profiting. An invention too obvious for patenting can be a trade secret, and can be something as mundane as a list of customers. However, trade secrecy has many limits. Most importantly, it is usually lawful for third parties to reverse-engineer a non-patented product to discover and use its secrets. In the general growth of pro-property sentiment, trade secrecy law has begun to change. Some statutes cast doubt on the reverse-engineering principle. There are many competing rationales for trade secrecy law, with some jurisdictions emphasizing the immorality of the defendant's behavior (the defendant will be liable if he, for example, trespassed to spy on plaintiff's industrial processes, or bribed an employee), other jurisdictions stressing the ability of trade secrecy to act as a spur to innovation in conjunction with patent law, and still others treating trade secrecy as a way to keep down waste: without trade secrecy law, both spies and spied-upon would invest in an ever-escalating arms race (Friedman; and Friedman, *et al.*, both in Towse and Holzhauser, 2002, vol. 3).

Moral rights. The category refers to legal rights concerned with protecting predominantly non-economic interests. For example, in some countries the 'moral right' of 'integrity' might protect the interest an author might have—independent of and perhaps even in conflict with his desire for profit—to keep versions of his work faithful to the original. Moral rights usually apply to works of art, but many countries give designers or inventors a small 'right of paternity'—the right to be cited in the application for a design or patent.

'Moral right' is the conventional but awkward translation of the French term, *droit moral*. A more accurate translation might be 'incorporeal rights'. Perhaps because the term 'incorporeal rights' is over-broad (it could refer to all of IP), the alternative phrase, 'moral rights' has come into frequent use. The term's use of the word 'moral' gives the doctrine the connotation of unquestionable justifiability. The doctrine does not deserve this connotation, given the way so-called moral rights can interfere with the free speech rights of iconoclasts, dissidents, and humorists.

Moral rights are recognized by several European countries, and are included in the most significant international copyright treaty, the Berne Convention. Typically, moral rights stay with the author even after copyright is sold. The most significant moral rights are the 'right of paternity' that allows the author to control who is named as the author of her work, and a 'right of integrity' that allows the author to forbid distortions of her work. In the United States, some equivalent rights exist within copyright, trademark, and unfair competition law, and contract law allows artists the ability to retain

versions

equivalent rights if they negotiate for them. However, despite the United States having signed the Berne Convention, concerns with both free speech and commercial practicality have kept that nation from wholesale adoption of the moral rights approach. In addition to their role in potentially vindicating personal interests, moral rights may have some useful economic functions (Santilli and Hansmann in Towse and Holzhauser, 2002).

Database rights. The EC has passed a directive for database rights which creates both a copyright (for the creative aspects of database compilations) and a *sui generis* right (for the information contained in the database) (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 77) 20). So far, the various nations of the Union have implemented the directive's *sui generis* protection in differing ways and to differing extents. Protection attaches if substantial investment has been made, and exclusivity extends even to persons not making wholesale copying. The economic wisdom of this law has been questioned by many. Because the EC directive has a reciprocity provision, it may have the effect of encouraging the United States to give protection to data, but this has so far been resisted. Under current US law, federal copyright can be given only to the creative 'selection and arrangement' of facts, and not to the facts themselves.

Conflicts can arise among the doctrines, and jurisdictions decide on priorities. In the United States, it is fairly clear that patent policy has priority. In order to give the public free use of functional but unpatented objects, otherwise-available copyright and trademark protection may be denied.

policy

3 THE CENTRAL ECONOMIC ARGUMENTS

3.1 Monopoly Analysis

The standard way to analyze the economics of IP is via monopoly analysis. To the extent that intellectual products will be under-produced without IPRs, exclusivity may be necessary to raise price above marginal cost. However, when price is above marginal cost, there will be some 'deadweight loss'. The most important component of this loss is the benefit forgone by people who would have paid the marginal cost for the product, but who do not purchase it at the monopoly price. The goal of an IP system is to maximize the net of incentives, deadweight loss, and administrative and other costs (Landes and Posner in Towse and Holzhauser, 2002; Fisher in Symposium on the Internet and Legal Theory, 1998).

The monopoly is argued to be productive for intangibles because without an exclusion right, there may be no way for the author/inventor/investor to earn a return on her investment.

Liebowitz (1986) has made an important contribution to the usual monopoly analysis by suggesting that the 'deadweight loss' that should be counted against a copyright system is solely the deadweight loss attributable to works that did not need the particular system as incentive. For works that by contrast did require the particular system as incentive to come into being, there is no 'competitive level of price and quantity' with which to compare; therefore, to say that such works generate 'deadweight loss' is to partake of a Nirvana Fallacy. Different copyright systems, and different durations, will have different deadweight losses. Liebowitz has shown how this analysis of deadweight loss can explain the limited durational provisions of both copyright and patent law.

3.2 Centralization

Kitch (in Towse and Holzhauser, 2002, vol. 2) has argued that one reason for giving inventions patent protection is to create an exclusive right capable of coordinating follow-on research and development, and avoid duplicative costs. From the same perspective, it can be argued that one reason why general ideas cannot be 'owned' under copyright law is that they are best developed in a *decentralized and diverse way*.

giving inventions

decentralized and diverse way
copyright law

3.3 Internalizing Externalities

Copyright, database rights, and to a lesser extent, patent law can be explained as a mode of '*internalizing externalities*'. As mentioned, just as ordinary tort law seeks to bring negative effects to bear on those who cause them, in order to discourage overly risky activity, so IP law seeks to bring positive effects to bear on those who cause them, in order to encourage productive activity. As with tort law, the hardest questions arise with 'joint causation': how to allocate as between joint contributors to a result. Increasing copyright protection to one generation of authors raises the cost of creation to the next generation of authors (Landes and Posner in Towse and Holzhauser, 2002; Reichman in Dreyfuss *et al.*, 2001). Doctrinal alternatives are many. Copyright in some countries (like the United States) gives no copyright to anyone who has used another's copyrighted work unlawfully, regardless of the creativity of the second author's adaptation. The inventors of improvements to patented inventions, by contrast, in many countries can have patents on their improvements. This encourages bargaining between the improver (who has a patent but cannot use it without the original patentee's permission to use the original invention) and the original patentee (who can use his original invention but not the improvement, unless he obtains permission) (Merges in Towse and Holzhauser, 2002).

3.4 From a Game Theory Perspective

Property theorists are accustomed to using ‘The Tragic Commons’, Garret Hardin’s multi-person prisoner’s dilemma, to illustrate the dangers that come from insufficiently privatizing a resource. The basic notion is that if persons can appropriate benefits privately, but externalize the costs of resource use to their other co-owners, the use (and costs) will grow excessive. The opposing perspective is that of the ‘tragic anti-commons’: if too many people have private claims, it may be impossible to get consent from everyone concerned: the use of the resource (and benefit) will be too small. Empirical work, while so far scant, is investigating the extent to which these different effects prevail (see the articles in Towse and Holzhauser, 2002, vol. 3). *vol. III*

One can use the prisoner’s dilemma in another way, both to illuminate the case for giving exclusive rights over inexhaustible intangibles, and to illuminate the case for *not* giving such rights. Assume that, in a world without copyright, there are two players. Each can choose to invest in becoming an author (which we will denote the ‘cooperate’ option), or in becoming a printer who copies what others write (the ‘defect’ option). Under certain conditions, a prisoner’s dilemma presents itself (see Fig. 28.1).

To minimize risk (the worst result, *C*, losing all one’s savings), the dominant strategy is to defect (become a printer). As a result, the society arrives at *D*: both parties defect. No one goes to the poor-house, but no one has a decent standard of living, either. More to the point: at *D*, if both parties become printers, and neither becomes an author, there are no books.

	If Person Two cooperates	If Person Two defects
If Person One cooperates	Pay-off A [<i>both write their own books, and each attains a decent standard of living</i>]	Pay-off C [<i>cooperator loses his shirt: after the author spends a year writing instead of earning other money, his work is copied and sold at price equaling marginal cost by the printer</i>]
If Person One defects	Pay-off B [<i>defector becomes rich: as a printer who pays nothing to create the book, he can sell copies cheaply, and prosper</i>]	Pay-off D [<i>two people with print shops have nothing to print; each goes to work flipping burgers at McDonald’s</i>]

Fig. 28.1. Pattern of pay-offs A, B, C, D to Person One (with the assumption that Person Two’s pay-offs are symmetrical)

The moral of the tale seems to be the advisability of adopting a law to change the pay-off structure, here, a copyright law. But note how many conditions need to be met before the above prisoner's dilemma structure will actually characterize the relations between author and potential copyist:

- (1) The cost of authorship (independent creation or production) is very high.
- (2) A second party is able to copy the creation/production from its originator at a cost lower than the cost of independent creation, and no other restraint (e.g. a sense of fair play) adds significantly to the copier's reasons for refraining from making copies.
- (3) These copies are perfect substitutes for the originator's product, being identical to the originator's product in regard to all characteristics that affect consumer preferences. Such characteristics include, *inter alia*: quality, reliability, number and quality of distribution networks, authenticity and associational value, and support services provided in connection with the product.
- (4) Consumers perceive the two products to be perfect substitutes. (Arguably, if this condition is met, it does not matter if the copies indeed *are* perfect substitutes.) The originator cannot rely on lead-time advantage, willingness to provide support services, or brand loyalty to distinguish his goods from the imitators' goods.
- (5) The difference between the cost of copying and the cost of independent creation is high enough that the price the copyist charges will be significantly less than the price the originator would have to charge in order to recoup his costs of independent creation.
- (6) In the absence of an opportunity to recoup the costs of independent creation, no one will invest in creative activity. That is, non-monetary remuneration (such as prestige, or the desire for artistic satisfaction) plays no role in inducing the originator's creation or production.
- (7) The independent creator or producer can recoup her costs only by means of selling or licensing copies, and in doing so, she has no effective recourse to price discrimination (see Gordon and Bone in Towse and Holzhauser, 2002, vol. 1).

Where one or more of these are absent—and the simultaneous appearance of all will be fairly rare—there ~~is~~ may be no prisoner's dilemma (see Breyer and Palmer, both in Towse and Holzhauser, 2002, vol. 1). For example, if the costs of independent creation are low, even a small lead time or reputational advantage can give the author as much leverage as she needs to obtain adequate incentives. Similarly, there will be no prisoner's dilemma if the customer perceives the copies as being 'inauthentic' or otherwise inferior—and in many fields (e.g. computer software) an author can provide convenience, updating, and support services that distinguish her product from that of copyists. Much of the current growth in IP law ignores ~~these facts~~, as Vaver (2000) suggests, with the lobbyists and legislatures instead calling on 'incentives' as if IP were the only source of incentives.

may
be

these
facts

3.5 The Role of the Personal

Another reason presented to explain the outsize growth in IP law is the role of the 'personal': the romanticization of the Author and, to a lesser extent, of the Inventor. The role of the romantic image may also explain the growth of the right of publicity. Much scholarship criticizes the unrealistic conception of both the authorship/inventor process, and the lack of connection between 'high authorship' and the typical created work (Lemley in Drahos, 1999; Boyle, 1996).

3.6 Price Discrimination

Lawyers tend to see the various rights under IP as separate 'things' to be bought and sold. That tendency, coupled with the field's increasing use of the 'property' label, makes it difficult to see that the basic way that copyright operates is to enable authors to discriminate between different purchasers of copies (Gordon in Symposium on the Internet and Legal Theory, 1998). Copyright is primarily a legal device for provoking self-selection by customers who plan commercially significant uses: they must identify themselves and bargain separately from ordinary purchasers, or face legal penalties for carrying out their plans without permission.

One can visualize the problem faced by an author in a world without copyright as a need to be able to distinguish the customers who want a copy of her work for its intrinsic purpose (e.g. customers who want to purchase a book to read it), from customers who want to buy a copy for other purposes, such as reproducing and publishing it, publicly performing it, broadcasting it, making it into new products, and so on. Copyright makes it unlawful for publishers to print, publicly perform, and so on, copyrighted works when they lack a license from the copyright owner to do so. This forces the publishers to identify themselves as high-value users and pay more than an ordinary user would. Copyright law by the same device prevents high-value users from employing 'arbitrage' to evade the price discrimination: Even though a publisher can buy an inexpensive copy from an ordinary reader, he cannot reproduce it without entering into further negotiations with the copyright owner. Copyright law thus empowers the author to charge a publisher more than she charges a reader. By engaging in this price discrimination, the author may be able to cover her costs of creation.

It has long been recognized (Demsetz, 1970), that if a monopoly is necessary for incentives, coupling it with price discrimination can serve the purpose of giving the author the needed inducements without reducing output as much as would occur under a monopoly that lacked price discrimination. In the Internet and computer context, click-through or shrinkwrap contracts sometimes purport to restrain copying of public domain materials, or to allow such copying only upon the payment of additional fees. Some commentators suggest that it is desirable to enforce contracts that create more price discrimination (Fisher in Symposium on the Internet and Legal

create
more

than the copyright
statute itself provides.

and Theory, 1998). However, price discrimination does not always reduce the cost of the copyright monopoly, and (if incentives are otherwise provided) monopoly plus price discrimination imposes a higher social cost than does pure competition.

Price discrimination also operates without using the law as a lever. Thus, under US law, libraries are permitted to do a great deal of photocopying without paying. But journals price-discriminate by charging libraries much more money for subscriptions than private subscribers are asked to pay. Liebowitz (in Towse and Holzhauser, 2002, vol. 1) suggests that this price discrimination may make clearing-house charges redundant, for photocopying yields significant indirect revenues through indirect appropriability. Price discrimination also has implications for 'fair use' and the operation of many other IP doctrines, particularly in regard to private and family use of copyrighted material (Bakos *et al.*, 1999; Meurer, 1997).

So viewed, copyright can learn from the literature that addresses the extent to which the law should enforce 'restraints on alienation' and other restraints on the use of chattels after they are sold.

3.7 Empirical Work

Empirical work is increasing in all areas of IP law (Lemley and others in Towse and Holzhauser, 2002, vol. 3), but so far the simple question of whether copyright and patent help more than hurt has not been answered. In trademark law, most observers probably think that traditional trademark law is economically desirable, for it saves consumers search costs and enables producers of desirable goods to capitalize on their investments in quality. Nevertheless, money is doubtless wasted on advertising to create barriers to entry, so even for traditional trademark law the empirical evidence is not yet conclusive. As for the new 'anti-dilution' trademark law, which permits suit even when the user of the mark is causing no confusion, it is hard to see any significant public benefit (Dreyfuss, 1990; Carter in Towse and Holzhauser, 2002, vol. 3). The same can be said for the right of publicity, but that doctrine has its primary roots in personality rather than economics, and is thus less embarrassed by the lack of social product.

4 TO THE FUTURE AGENDA OF IP: LOOKING AT GIFTS AND INTERDEPENDENCE

Most IP scholarship has focused on the potential justifications for the author or inventor's rights, focusing either on arguments drawn from morality and natural law,

or from consequentialism. Gradually, a shift is occurring toward investigating the negative consequences that can arise from overly enthusiastic grants of property.

For example, Eisenberg (in Dreyfuss *et al.*, 2001) has suggested that the culture of science may require, for full flowering, a free flow of information, and less balkanization than patent law will permit. (For a response to this suggestion, see Kieff, 2001 (collecting literature).) Mandeville (in Drahos, 1996) similarly suggests that for uncodified information, flows unblocked by exclusive rights may be necessary. Benkler (2002), Scotchmer (in Towse and Holzhauser, 2002), and others similarly explore arenas where economic welfare can be maximized by the lack of exclusivity. In other words, the very progress that patent law seeks to encourage may be undone by patent law itself.

Something similar may occur in the arts. Lewis Hyde in his evocative book, *The Gift*, suggests that an important part of the aesthetic process is the living relation between the artist and what she receives. The beauty of the physical world and the life within predecessor artists' work create in the receiving artist a sense of gratitude. The artist repays the gift by his own creation—so that gratitude becomes a catalyst (or better, a nutrient fluid) fostering new creativity. Hyde points out at least two things that can interfere with this necessary gratitude: monetary payment, and a sense of calculation. In my mind, the danger lies less in a need to pay, than in a need to calculate. Imagine a composer inspired by a book that she read as a child to make an opera of it. It is hard to imagine her genuine impulse of creativity surviving a process of calculating which children's book has the best cost-benefit ratio between license fee and likely revenue flow. Much writing from artists of all kinds indicates that those whose motivation is intrinsic are not fully free to calculate, to search for the cheapest license or the author's heir who does not object to his ancestor being reinterpreted and criticized.

Economists usually say there are two things distinctive about IP: that works of authorship and invention are not easily fenced, and that they can be used by large numbers of people without being used up. While the fencing notions have been well developed, a crucial area remains in need of more explicit theorizing: that is, the inexhaustibility of IP. Scholarship needs to move into analyzing that aspect on its own. My own intuition is that we need to spend more time thinking about the gift relationship and interdependence. What makes a community are the exchanges and reciprocity for which its members do not demand explicit and calculating payment. To demand too much payment may erode the sense of gratitude that is at the bottom of so many of our institutions, such as trust, and willingness to obey law.

Shareable goods are a traditional source of binding groups together: not only standard 'public goods' such as highways and defense, but also folk tales, art, songs, and symphonies. The same is true on the technological side: even to drink a glass of water is to benefit from generations before us that learned how to temper glass, how to direct liquid flows, how to disinfect. We can never pay for everything we have—but we may, if forced to pay too often for too much, begin to have the illusion that we have paid for everything. The illusion of independence is dangerous when we are in

reality interdependent. IP is a magnificent resource for building community, but the new movements to 'enclose' IP threaten to waste that potential. Even from a purely consequentialist perspective, therefore, the possibilities of gift relations need to be systematically explored.

REFERENCES

- Amabile, T. M., Collins, M. A., Conti, R., Phillips, E., Picariello, M., Ruscio, J., and Whitney, D. (1996). *Creativity in Context: Update to the Social Psychology of Creativity*, Boulder, Colo.: Westview Press.
- Bakos, Y., Brynjolfsson, E., and Lichtman, D. (1999). 'Shared Information Goods', *Journal of Law and Economics*, 42: 117–55.
- Benkler, Y. (2002). 'Coase's Penguin, or Linux and The Nature of the Firm', *Yale Law Journal*, (Winter), 112: 369–446.
- Boyle, J. (1996). *Shamans, Software, and Spleens: Law and the Construction of the Information Society*, Cambridge, Mass.: Harvard University Press.
- Coombe, R. J. (forthcoming). 'Commodity Culture, Private Censorship, Branded Environments, Global Trade Politics and Alternative Articulations: Intellectual Property as a Topic of Law and Society Research', in A. Sarat (ed.), *Companion Guide to Law and Society*, Oxford: Blackwell.
- Cornish, W. (2002). 'The Author as Risk-Share', *Columbia Journal of Law and the Arts*, 26: 1–16.
- Demsetz, H. (1970). 'The Private Production of Public Goods', *Journal of Law and Economics*, 13: 293–306.
- Denicola, R. (1994). 'Institutional Publicity Rights: An Analysis of The Merchandising of Famous Trade Symbols', *North Carolina Law Review*, 62: 603–41 esp. 617–27.
- Drahos, P. (1996). *A Philosophy of Intellectual Property*, Aldershot: Dartmouth/Aldershot.
- (ed.) (1999). *Intellectual Property: The International Library of Essays in Law and Legal Theory, Second Series*, Aldershot: Ashgate/Dartmouth.
- Dreyfuss, R. C. (1990). 'Expressive Genericity: Trademarks as Language in the Pepsi Generation', *Notre Dame Law Review*, 65: 397–424.
- Zimmerman, D. L., and First, H. (eds.) (2001). *Expanding the Boundaries of Intellectual Property: Innovation Policy for the Knowledge Society*, Oxford and New York: Oxford University Press.
- Elkin-Koren, N., and Netanel, N. W. (eds.) (2002). *The Commodification of Information*, The Hague: Kluwer Law International.
- Ginsburg, J. (1990). 'A Tale of Two Copyrights: Literary Property in Revolutionary France and America', *Tulane Law Review*, 64: 991–1023.
- Gordon, W. J. (1993). 'A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property', *Yale Law Journal*, 102: 1533–609.
- Heller, M. A., and Eisenberg, R. S. (1998). 'Can Patents Deter Innovation? The Anticommons in Biomedical Research', *Science*, 280: 698–701.
- Hughes, J. (1998). 'The Philosophy of Intellectual Property', *Georgetown Law Journal* 77: 287–365.
- Hyde, L. (1979). *The Gift: Imagination and the Erotic Life of Property*, New York: Vintage Books.
- Kase, F. J. (1967). *Copyright Thought in Continental Europe: A Selected Bibliography*, South Hackensack, NJ: Fred B. Rothman & Co.

- Kieff, F. S. (2001). 'Facilitating Scientific Research: Intellectual Property Rights and the Norms of Science—A Response to Rai & Eisenberg, *Northwestern University Law Review*, 95: 691–705.
- Lessig, L. (1999). *Code and Other Laws of Cyberspace*, New York: Basic Books.
- Liebowitz, S. J. (1986). 'Copyright Law, Photocopying, and Price Discrimination', in J. Palmer and R. O. Zerbe, Jr. (eds.), *Research in Law and Economics: The Economics of Patents and Copyrights*, 8: 181–200.
- Litman, J. (2001). *Digital Copyright*, Amherst, NY: Prometheus Books.
- Meurer, M. J. (1997). 'Price Discrimination, Personal Use and Piracy: Copyright Protection of Digital Works', *Buffalo Law Review*, 45: 845–98.
- Rose, C. M. (1998). 'The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems', *Minnesota Law Review*, 83: 129–82.
- Sherman, B., and Bently, L. (1999). *The Making of Modern Intellectual Property Law: The British Experience 1760–1911*, Cambridge and New York: Cambridge University Press.
- Symposium on the Internet and Legal Theory. (1998). *Chicago-Kent Law Review*, 73.
- Towse, R., and Holzhauser, R. (eds.) (2002). *The Economics of Intellectual Property*, vols. 1–4 Cheltenham: Edward Elgar.
- Vaver, D. (2000). 'Intellectual Property: The State of the Art', *Law Quarterly Review*, 116: 621–37.