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Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations

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As intellectual property rights have gained in prominence, businesspeople and scholars alike have complained of the increasing burden of obtaining intellectual property licenses and, failing this, litigating intellectual property disputes. Intellectual property experts, especially scholars, have responded to this burgeoning thicket of rights with a series of initiatives to expedite deal making by means of statutory compulsory licensing. These licenses are classic examples of “liability rules” in the foundational legal entitlements framework of Guido Calabresi and A. Douglas Melamed. They appear to be a compromise: they address the mushrooming transactional hurdle created by new and stronger intellectual property rights, while preserving most of the economic advantages that accompany strengthened rights. In this Article, Professor Merges argues that proposals to create more compulsory licenses are rooted in a faulty theoretical framework. Based on a survey of the diverse institutions various industries have cultivated to handle intellectual property transactions, Merges contends that “repeat players” (individuals and firms that frequently need to exchange rights) can and often do take steps to overcome transactional bottlenecks. Whether through copyright collectives, such as ASCAP and BMI in the music

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industry, or undertakings such as patent pools in automobile and aircraft manufacturing, those with a recurring need to transact in intellectual property rights invest in administrative structures that lower the costs of exchanging rights. Among other functions, these collective rights organizations promulgate rules and procedures for placing a monetary value on members' property rights. They thus conserve on transaction costs either by making it easier to identify and locate rightholders, or by creating the occasion for repeat-play, reciprocal bargaining, versus more costly one-shot exchanges. Drawing on a body of academic literature known as the new institutional economics, Professor Merges explains and analyzes the origins and operation of these organizations. He also argues that entitlement theory must be adjusted to recognize the possibility that such institutions will evolve out of a background of strong property rights. More generally, he points out that entitlement theory ought to incorporate a more dynamic understanding of the importance of contracting after entitlements are granted. Professor Merges applies his observations and theoretical insights to an important contemporary controversy: whether Congress ought to legislate a compulsory license for digital content needed by the multimedia industry. He argues that it should not. Given the underlying economics, and consistent with experience in other industries, existing intellectual property rights will force industry participants to invest in institutions to conduct transactions. Indeed, consistent with the analysis in this Article, evidence indicates this is already occurring.

INTRODUCTION

Intellectual property (IP) has lately become a kind of unrelenting organic force. Congress and the courts cultivate new varieties of it every day, while established species grow more robust. Even as the academic world struggles to maintain a careful ecological balance between property rights and public domain, new shoots and runners appear underfoot. And the thickening of the undergrowth is robust as well: aided by careful pruning and cross-breeding, IP has grown increasingly resistant to one of its traditional pathogens, the antitrust laws. Perhaps most remarkably, it has even taken root in the previously barren terrain of underdeveloped economies.

This Article is aimed at providing conceptual guidance for those who need to traverse the new thicket of intellectual property rights

(IPRs).¹ Each vine, each plant, standing in one's path represents a distinct IPR owned by an individual. To pass through, one needs a license from each owner. Where a single right blocks the path, this is easy: a single licensing contract does the trick. Today, however, business people more often than not encounter a tangled, twisted mass of IPRs, which criss-cross the established walkways of commerce. Progress along this path does not come cheaply; rather, it requires numerous contracts with multiple, independent right holders.

In IPR systems around the world, a traditional solution to entanglements of this sort is to adopt a "middle path": the compulsory license. Legislation granting IPRs is conditioned, under this approach, with a statutory mandate that the rights must be licensed to all comers willing to pay the pre-set price.²

Legislatively mandated licensing of this sort reduces transaction costs in two ways.³ First, contract terms are predetermined. This either eliminates haggling, or reduces it substantially.⁴ Second, compulsory licensing schemes often come equipped with built-in administrative support. This saves the parties the costs of record keeping, payment collection, and royalty disbursement.

Despite these savings, however, this Article counsels against compulsory licensing as a way to reduce transaction costs. The lesson learned in a number of industries is that privately established Collective Rights Organizations (CROs) will often emerge to break the transactional bottleneck. From patent pools to collective copyright licensing organizations such as ASCAP and BMI,⁵ IPR owners in various industries have demonstrated the workability of these private transactional mechanisms. Indeed, these case studies uncover two distinct advantages of CROs: expert tailoring and reduced political economy problems.

In a CRO, knowledgeable industry participants set the rules of exchange. These rules are not likely to be uniform, one-size-fits-all terms as in a statutory compulsory license; they often vary according to the

1. Intellectual property rights include patents, copyrights, trademarks, and a variety of roughly similar rights created by state statutes and common law. See J. THOMAS MCCARTHY, MCCARTHY'S DESK ENCYCLOPEDIA OF INTELLECTUAL PROPERTY 219 (2d ed. 1995).

2. See *infra* Part I.B.1.

3. Transaction costs include drafting, negotiating, and performance-safeguarding costs, together with the costs of post-contract haggling (renegotiation), compliance monitoring, and enforcement. See OLIVER E. WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM 20-22 (1985).

4. For various reasons, extensive bargaining-around does not take place in transactions concerning IPRs subject to compulsory licensing. And where private ordering does occur in the shadow of these compulsory licenses, the statutory terms place an artificial upper limit on the compensation paid to IPR holders. See *infra* Part I.B.

5. "ASCAP" stands for the American Society of Composers, Authors, and Publishers; "BMI" stands for Broadcast Music Incorporated. See discussion *infra* Part II.A.

broad features of the rights. Individual works covered by discrete IPRs are assigned to categories based on the members' knowledge and experience. Through this expert tailoring, CROs produce an intermediate level of contract detail, reflecting not only collective industry expertise but also the need for efficiency in carrying out a high volume of transactions.

An important component of expert tailoring, then, is the use of royalty rates as set by experts. But the statutory compulsory licenses often begin with rational royalty rates as well. What separates private CROs from compulsory licensing schemes is that the former have proven to be more flexible over time. ASCAP, for example, frequently adjusts the rates it charges radio and television stations. Statutes, on the other hand, are difficult to change. Because interested parties can often spend enough to veto a change in legislation,⁶ compulsory licenses in the IPR field are subject to "legislative lock-in." CROs avoid this problem.⁷

The CROs featured in this Article therefore teach an important policy lesson. Equally important, however, is their lesson for the theory of legal entitlements. This branch of legal theory, which concerns itself with which types of legal entitlements a state may grant to promote efficiency, has tended to emphasize the relative advantages of two primary entitlements: property rules and liability rules. As explained in greater detail below, industries characterized by the need for high-volume IPR transactions would, following the tenets of entitlement theory, best be served by the grant of liability rule entitlements—i.e., compulsory licenses. But the actual CROs studied in this Article flout this prescription: they are in fact based on *property rule* entitlements. This, I argue, is no coincidence: property rule entitlements drive IPR holders in high transaction industries into repeat-play bargaining which leads to the formation of CROs.

To the extent these CROs outperform compulsory licenses in lowering transaction costs, they stand conventional entitlements theory on its head. The initially higher transaction costs of property rule entitlements actually serve a benign purpose: they lead individual IPR holders to form CROs. These privately organized institutions then devolve standard rules of exchange that substantially lower transaction costs. This

6. Kenneth A. Shepsle & Barry R. Weingast, *The Institutional Foundations of Committee Power*, 81 AM. POL. SCI. REV. 85, 89 (1987) (discussing the pervasiveness of "veto groups" in legislatures). Thanks to Professor Jo Andrews for this point.

7. Although in practice virtually all compulsory licenses in the IPR field have been enacted by statute, there is no reason in theory why they could not be administered judicially. As discussed later in this Article, however, this solution does not appear promising for IPRs that are exchanged in large volumes. The costs of individualized judicial administration might well surpass the transaction cost savings of the compulsory license.

achieves the same purpose as state-created liability rules. The difference is that the individual right holders, rather than the state, set the standard terms of exchange. This process of contracting into liability rules significantly reduces state involvement in the creation of efficient entitlements. Given this advantage, I suggest in the conclusion that property rule entitlements may be superior in other situations where right holders encounter each other frequently.

To bring this account down to earth, consider a current example. By now, only cave dwellers have managed to avoid some awareness of multimedia, the Internet, and other emerging digital media. Many photographers, writers, and graphic designers want to sell their wares as digital "content," over the Internet for example. Buyers of content can then assemble new multimedia products, such as CD-ROMs. This, of course, is the whole point of multimedia: it integrates different types of information into a single, easy-to-use product.

Take, for example, a firm interested in creating a computerized "encyclopedia of quilting." Such an encyclopedia would allow the user to call up a description of all sorts of things related to quilting on a computer screen: the history of quilts, famous quilting patterns, information on ethnic groups associated with fine quilting. Multimedia encyclopedias allow the user to "jump" from one place to the next as curiosity dictates. For example, in the middle of a long paragraph of text about the Amish and their quilts, a user can put the computer's mouse pointer on a little drawing of a quilt on the screen and then call up a full-page image of a quilt. The user can also "zoom in" on the image to get close-up views.

Imagine that you are putting together such an encyclopedia. You would have to assemble a great deal of diverse material: text about quilting, photos of quilts and people quilting, and perhaps some drawings illustrating quilting techniques, stitching patterns, etc. Finally, you might consider putting in some appropriate music to make a "soundtrack" that would accompany the text, or when the reader selected a particular topic of interest (e.g., some Irish music to play when the reader was looking at the text and illustrations on Irish quilts.)

While you might be industrious, actually creating all the components for your encyclopedia yourself (text, photos, graphics, and music), more likely you would want to buy some of these components from others. After all, someone out there must have some photos of the Amish for sale; and someone else must have some appropriate folk music; someone must have photos of famous quilts; and so on.

How would you assemble all these components? How would you get copies of everything? And, equally important, how would you get legal clearance to use everything in your product? The old fashioned

way would be to contact a variety of companies that specialize in collecting and selling these "inputs" and the rights that cover them. So for photos, you might contact a photo agency known to have an extensive library of photos. For text, you might look up appropriate articles in the library and contact the publishers of magazines containing them. Finally, for music, you might contact record companies or perhaps the organizations responsible for selling musical rights to radio and television stations (i.e., ASCAP and BMI). This would be a time-consuming process.

Inspired by the speed of communication on the Internet, a host of entrepreneurs have proposed electronic systems that would make it much easier to contract for the relevant rights. These proposed "electronic clearinghouses" would consolidate all these transactions into a single electronic marketplace.⁸ Enter this marketplace, and you would have instant access to a cornucopia of content. Clearly, one-stop electronic shopping of this sort would make it much easier to create and market your quilting encyclopedia.

Yet even with a centralized electronic marketplace, you would still need to reach an agreement with each seller—negotiation that could be tricky, especially if the seller realized that you were critically dependent on his or her content. The seller could then hold out and extract an exorbitant fee to use that content.⁹

Through the example of the quilting encyclopedia, we can readily see the thicket or tangle of IPRs that must be negotiated. One solution commonly put forward for problems of this sort is the compulsory license. I suggest an alternative: allowing private collective rights organizations to develop.

In the past when those in need of a multitude of licenses have asked their national legislature for help, legislatures have responded by creating a statutorily mandated contracting system, or compulsory license. Applying this mechanism in the multimedia context, Congress would set the terms of sale for text, pictures, etc.¹⁰ Proponents argue that this would make it much easier to carry off these deals. You would simply identify the content you wanted, look up the price in the legislatively

8. See *infra* Part IV.B.2.

9. A holdout is someone who refuses to agree to a bargain for strategic reasons. For example, if a city government needs to buy five parcels of land from property owners *A*, *B*, *C*, *D*, and *E*, *E* might wait until the other four (*A-D*) have sold their land. This puts *E* in the driver's seat in bargaining with the city: *E* can now charge a very high price—in theory, up to the total amount the city has to spend on the project, minus what was paid to *A-D*—for his or her land. Since this price will often be more than the average price paid to *A-D*, and in any event more than the price *E* could have obtained if he or she were not the last to sell, such a holdout strategy will be rational in many cases. See generally, Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089, 1106-07 (1972).

10. See *infra* Part IV.B.1.

mandated schedule, and your content-acquisition problems would be over.

While legislatively determined licensing of this sort does appear to reduce certain transaction costs, a compulsory license involves costs and problems of its own. First, Congress would have to devise a schedule of royalties, thus encouraging lobbying. Rights holders would spend money to persuade Congress to set high rates for each type of content (music, text, photographs, etc.), while potential buyers would argue for low royalties to stimulate growth in the industry. Congress is as likely to be influenced by lobbying as by underlying economic logic. Even if Congress gets it right,¹¹ the money spent to educate Congress is wasted. The industry could get the same deal without many of these costs. Even if the royalties made sense when enacted, there is a good chance that conditions in the industry will change over time. Because creators of multimedia works benefit from the below-market royalties in the statutory schedule, however, they would lobby to leave things as they are. And they might well be successful, since it is easier to preserve the legislative status quo than to effect a change. Indeed, if past experience with compulsory licenses is any guide, the royalty rates might well become "locked in," and therefore subject to only very modest changes over time.

Industry participants faced with the need to transact over and over again could probably work out something much more in tune with their needs than a congressional scheme of one-size-fits-all transactions. The necessity of coming together to negotiate would produce pressure to come up with some system for handling these transactions. It might be a simple system, such as some basic "rules of thumb," widely shared in the industry, about how much each piece of content should cost. Or it could be more elaborate—maybe even entailing some administrative structure for setting royalties and settling disputes about the proper royalty rate. Whatever institutional structures the content owners and users devised, they would reflect the expertise of these industry insiders. Even more important, they could be changed over time by industry participants. For these reasons, private, voluntary organizations of this kind would be superior to state-mandated compulsory licenses.

This Article studies a number of privately established organizations in the intellectual property field that have operated successfully without statutory compulsory licensing. Patent pools and collective copyright licensing organizations such as ASCAP and BMI collect rights from diverse sources and price them for sale to users. They establish internal rules for dividing licensing revenues. Because both sets of rules operate on a wide portfolio of rights, I see them as analogous to congressionally

11. See *infra* Part II.B.1.

mandated rules of exchange. The difference is that these rules are established by the members of the organization, and thus are the product of internal negotiations by knowledgeable people in the industry. As a consequence, they are not uniform, one-size-fits-all terms as in a statutory compulsory license; rather, they vary depending on the broad features of the rights. Although CROs can not replicate the detailed negotiations of two individual parties, the rules they devise are more likely than the compulsory license to approximate market bargains.

This Article presents my study of CROs and concludes with a clear lesson for today's policy makers: stay away from compulsory licensing for new media! Society and the industry will be better off if Congress exercises restraint, creating an environment in which private organizations can flourish.

My policy recommendation is based on working principles derived from two sources: existing literature on entitlements, institutions, and public choice; and a study of collective rights organizations and other institutions. Part I discusses three bodies of literature relevant to understanding the relationship between intellectual property rights and institutions. First I discuss the legal entitlements literature as it has developed from the works of Ronald Coase, and Calabresi and Melamed.¹² I argue that the conclusion of some scholars that liability rules best facilitate transactions and bargains is inapplicable in the IPR context, in which property rules would create greater long-term benefits. Second, I review some of the problems that occur when collective valuation is conducted not by the courts, but by Congress when it establishes compulsory license schemes. Finally, I discuss the "new institutionalism" literature, which analyzes the emergence of private organizations, to gain insight into the potential for collective rights organizations in the intellectual property arena. Part II describes the founding and operation of two types of exchange institutions involving intellectual property: copyright collectives such as ASCAP, and patent pools. Part III extends the discussion of IPR-related exchange by describing a number of institutions that operate without the benefit of formal, state-backed property rights. The new multimedia industry, briefly described earlier, is the subject of Part IV, which urges policy makers (particularly Congress) to heed the lessons of other industries and resist the urge to enact broad compulsory licenses for multimedia content.

12. See R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON 1 (1960); Calabresi & Melamed, *supra* note 9.

I

THEORIES OF RULES AND INSTITUTIONS RELEVANT TO
COLLECTIVE RIGHTS ORGANIZATIONS

Traditional intellectual property rights theories, those that take a utilitarian (incentive) approach and those adopting a natural rights approach, despite their disagreements, assume that IPRs cover a single, discrete market product.¹³ They pay no systematic attention to the role of IPRs as inputs into multi-component products. They are therefore not helpful in understanding the *transactional* role of IPRs. In order to understand the role of intellectual property rules when economic agents must obtain multiple IPRs before introducing a product to the market, we must turn to other bodies of literature not normally associated with intellectual property: entitlements theory, the new institutionalism, and public choice literature.

This Part concludes that the combination of strong property rights and private institutions provides a mixture that can facilitate transactions. The existence of collective rights institutions demonstrates that private collective action can in effect convert initial entitlements into something new. Large-scale private ordering can occur after initial entitlements are granted. We should take this fact into account when deciding on initial entitlements. The state can actually facilitate the creation of private exchange institutions in repeat-play settings by granting property right entitlements that will, where necessary, force individual right holders to assemble their own transactional framework, i.e., a private institution.

A. *Lessons from Entitlement Theory*

The legal entitlements literature originating with the work of Ronald Coase, which focuses on the question of *how* rights are protected rather than *whether* they are protected, helps one understand the relationship between IPR rules and IPR transactions.¹⁴ Coase began with the question of who should hold an entitlement and concluded that in the absence of transaction costs it is irrelevant who holds a right initially;

13. For a discussion of these theories, see ROBERT PATRICK MERGES, *PATENT LAW AND POLICY* (1992). In this Article, I take the need for an entitlement as largely given. By contrast, conventional intellectual property theory sees the presence of any entitlement as problematic. See, e.g., MERGES, *supra*, at ch. 1 (describing theories of patent law). I do not question the importance of justifying intellectual property entitlements. Nor do I intend to attempt a rapprochement between theories of intellectual property and legal entitlements. Rather, I hope simply to accentuate the transactional side of IPRs, a neglected aspect that is becoming increasingly important.

14. This Article focuses on how individual right holders structure institutions for carrying out the Coasean imperative: seeing that rights wind up in the hands of the party who values them most. Coase, *supra* note 12. For an excellent account of that article's conclusions, which have come to be known as the Coase Theorem, see Robert D. Cooter, *Coase Theorem*, in *THE NEW PALGRAVE: A DICTIONARY OF ECONOMICS* 457-59 (1987).

parties will bargain to an efficient outcome.¹⁵ But Coase was at least as interested in the fact that once transaction costs enter the picture, initial entitlements do matter.¹⁶ Following up on Coase, scholars have asked not only who should receive the initial entitlement, but how it should be protected.

1. *Property Rules and Liability Rules*

This literature begins with the Calabresi-Melamed Framework.¹⁷ Calabresi and Melamed describe all legal entitlements as protected by either “property rules” or “liability rules.” The former are best described as “absolute permission rules”: one cannot take these entitlements without prior permission of the owner. The right holder, acting individually, thus sets the price. Most real estate is protected by this sort of entitlement.

By contrast, the latter, liability rules, are best described as “take now, pay later.” They allow non-owners to use the entitlement without permission of the owner, so long as they adequately compensate the owner later. In the Calabresi-Melamed Framework, this ex-post adequate compensation is deemed “collective valuation.” In their examples, it is the function of a court (and a jury) to determine this valuation. The government’s eminent domain power to take property so long as it pays just compensation is the classic example of a liability rule. Standard contract law provides another example of a liability rule: parties to a contract can breach it if they like, so long as they pay court-determined damages after the fact.

The organizations studied in this Article present what might seem to be a paradox in light of the literature on entitlements: they produce what appear to users as liability rules, but which are actually based on IPRs—quintessential property rule entitlements.¹⁸ Yet it is neither paradoxical nor coincidental. The high costs of contracting—both among members, and between members and users—drive the right holders to pool their property rights in a collective organization. The relatively uniform terms offered by this organization lower the costs of exchange with users. At the same time, the organization’s internal rules that divide up royalties save on member-to-member transaction costs. It is the high transaction costs associated with the initial entitlements that lead the parties to establish the organization—an organization that then dramati-

15. Cooter, *supra* note 14, at 457.

16. See THRAINN EGGERTSON, *ECONOMIC BEHAVIOR AND INSTITUTIONS* 105 (1990) (“Coase’s main contribution . . . was to arouse our awareness of the implications of *positive* transaction costs.”).

17. Calabresi & Melamed, *supra* note 9.

18. For an explanation of why intellectual property rights are almost always property rule entitlements, see Robert P. Merges, *Of Property Rules, Coase, and Intellectual Property*, 94 COLUM. L. REV. 2655 (1994).

cally lowers the costs of exchanging the rights. In other words, the property rule entitlements granted at the outset actually lead to a liability rule-like regime, though one based on collective valuation by firms, rather than by an arm of government.

Individuals or governments are not our only choices for valuing property rights. Previous literature has ignored the possibility of valuation by private collective organizations. Because these organizations offer a fixed menu of terms to all comers, and because the menu is determined by the members and not the government, I call them “private liability rule” organizations. Similarly, I call the process of creating them “contracting into liability rules,” because the contracting parties start with property rule entitlements, and wind up subject to a collectively determined liability rule.

To avoid misunderstanding, I provide a few points of clarification. First, not every contract involving a property rule entitlement whose breach would yield money damages is a liability rule by my definition. A simple contract that involves an entitlement that can be taken with monetary compensation does not establish a liability *rule*—i.e., a general rule of compensation applicable to all who take the right. Predetermined compensation is simply the price the entitlement holder has charged for the right. When a holder of a property rule entitlement puts a price on it, she has not necessarily turned it into a liability rule.

By contrast, an agreement among members of a collective rights organization *does* establish a liability *rule*. The members generally agree to establish principles applicable to all members and to all users of the members’ rights. Primarily, they agree on valuation rules for these two purposes. Usually they agree on the terms they will offer to users, most notably price, as well as the terms on which they will split the group’s gross income.¹⁹ The generality of these policies merits the label “rule” as distinguished from mere “terms” of a specific bilateral contract.

2. *Liability and Property Rules Are Not Equivalent*

Once we recognize the role that private institutions can play in creating and enforcing liability rules, we must revisit the question of which rule better facilitates transactions. Several prominent scholars have concluded that liability rules work as well as property rules in producing a robust pattern of post-grant transactions. They have identified numerous instances where liability rules encourage as many—and in some cases, more and better—transactions than property rule entitlements. If

19. It is important to point out here that in many of the CROs studied in this Article, members may also be users. A member firm may contribute IPRs to the CRO *and* may use rights contributed by other members.

these scholars are correct, the thesis of this Article is challenged, for their analysis implies that there should be no connection between initial property rule endowments and the emergence of collective liability rules. As applied to CROs, their theory would predict that they could have emerged as readily out of liability rule entitlements as from property rules.

This paper will demonstrate that such theories are less applicable in the intellectual property context. The argument runs as follows. IPRs, unlike other entitlements, can be used simultaneously by more than one person. As we shall see, this makes it impossible for entitlement holders who value the entitlement more highly than the payment called for under the liability rule to "buy off" potential takers (infringers). The upshot is that a liability rule places a ceiling on the value of the entitlement, which can conceivably have devastating incentive effects.

This conclusion runs counter to much of the scholarly work in the contemporary entitlements literature, which argues that liability rules can induce private bargaining in many cases, just like a property right. For example, Ian Ayres and Eric Talley state that the holder of a liability rule entitlement can bargain around the liability rule by paying the other party not to exercise the right to take the entitlement.²⁰ The preset price of the liability rule need not be "correct," because parties can bargain around it.²¹

Ayres and Talley argue, contrary to traditional theory in the area, that property rights do not always lead to more private bargaining than liability rules.²² Yet their example is far simpler than the typical intel-

20. Ian Ayres & Eric Talley, *Solomonic Bargaining: Dividing a Legal Entitlement to Facilitate Coasean Trade*, 104 YALE L.J. 1027, 1036-39 (1995).

21. For example, imagine that A holds an easement in a piece of property that is otherwise owned by B. Imagine further that there is a liability rule in place: if B wants to buy back the easement, she will have to pay \$100 to A. Finally, imagine that A values the easement at more than \$100. Under these circumstances, Ayres and Talley point out that the holder of the easement (A) will simply pay the owner of the land (B) not to exercise his right to take the easement. The amount of the payment will depend on several factors, including the value to the owner of eliminating the easement and the bargaining savvy of the parties. The essence of examples such as these is that even under a liability rule, private bargaining is possible.

For related studies, see A. Mitchell Polinsky, *Controlling Externalities and Protecting Entitlements: Property Right, Liability Rule, and Tax-Subsidy Approaches*, 8 J. LEG. STUD. 1 (1979); A. Mitchell Polinsky, *Resolving Nuisance Disputes: The Simple Economics of Injunctive and Damage Remedies*, 32 STAN. L. REV. 1075 (1980) [hereinafter Polinsky, *Resolving Nuisance Disputes*].

22. Ayres and Talley, *supra* note 21, at 1029-36. In fact, Ayres and Talley argue that under appropriate circumstances liability rules can be *superior* to property rules. The advantage comes about in certain cases because liability rules can be set in a way that forces the parties to reveal some information about how much they value the entitlement. Ayres and Talley state that this therefore reduces bargaining costs; it gives the parties a "head start" in negotiations, as compared to the property rule alternative. *Id.* at 1047. *But see* Louis Kaplow & Steven Shavell, *Do Liability Rules Facilitate Bargaining: A Reply to Ayres and Talley*, 105 YALE L.J. 221 (1995) (critiquing this point); *see also* Louis Kaplow & Steven Shavell, *An Economic Analysis of Property Rules Versus Liability Rules*, 109 HARV. L. REV. 713 (1996) (arguing, on different grounds, superiority of liability rules

lectual property analogue because in their example there are only two parties, and each is known to the other. The holder of the easement need only bargain with the owner of the property and no one else. Intellectual property is different. There are many potential infringers—many people who might be in a position to take an entitlement. This poses a problem for one who holds a liability rule entitlement over an IPR valued more highly than the entitlement price. It would be extremely difficult in most cases for an intellectual property right holder to identify all potential infringers, and downright impossible to separate those who posed a serious threat of infringement from those who did not. Once word got out that people were being paid not to infringe a right, the number of people who suddenly showed an interest in infringing (and who therefore needed to be bought out in advance by the right holder) would skyrocket. There would soon be a long line of potential infringers at the right holder's door. And, unlike the easement holder in the earlier example, it would be impossible to tell which, if any, posed a bona fide threat to the entitlement.²³

Because of the long line of potential infringers, a liability rule in the intellectual property context will tend to act as a ceiling on valuation, allowing only for bargaining rule downward from the liability. This downward bargaining is precisely what we see in the one intellectual property context where entitlement prices are specifically set by Congress, the cover or mechanical compulsory license.²⁴ The state in effect sets the top entitlement price—with predictably negative effects on incentives.

In light of the peculiar nature of intellectual property, the only way to get parties truly to bargain over the valuation of intellectual property

under certain conditions). It is crucial to note, however, that for liability rules to have this forcing effect, they must be set a certain way. Specifically, the liability rule must be set so that some potential users of the entitlement value it more than the liability rule amount, and some less. Thus, while the authority setting the liability rule need not know the value of the entitlement to each potential user, nor even for the average user, it must have some information about the range of values users may place on the entitlement. In the intellectual property context, the relevant authorities might be hard pressed even to assess this range. Valuation problems in this area are notorious. *See Merges, supra* note 18, at 2658-59. Consequently, it is not clear whether, even apart from the point made in the text, the Ayres and Talley argument holds water in the IPR context.

23. I made this point in a previous version of this Article. *See* Robert P. Merges, *Contracting into Liability Rules: Institutions Supporting Exchange of Intellectual Property Rights* (Working Paper 1994) (on file with author). A closely related point was subsequently made by Louis Kaplow and Steven Shavell. *See* Kaplow & Shavell, *supra* note 22, at 765-66 ("Consider the situation of an owner and a particular taker who values the car less highly than does the owner (but above the level of damages). The owner would like to bargain with the taker and pay him not to take the car. However, it would be irrational for the owner to pay this taker not to take the car, and then another and another. Therefore, the potential taker will tend to take the car even though the owner values it more highly. The general point, in other words, is that when courts err and set damages too low, bargaining by owners will be effectively infeasible, and socially undesirable takings will occur.").

24. *See infra* Part I.B.1.

rights is to make them into property rule entitlements. Property rule entitlements solve the problem of the phantom infringers. Right holders set the price of the entitlement, so they will transfer it only when infringers value it more highly and are willing to prove it by paying in advance. Liability rules, as discussed above, will place a ceiling on the amount the right holder can collect. If the valuation is set too low, it will affect the incentives of those who wish to create things covered by these rights—a key concern traditionally in intellectual property law. The only way to prevent this is to set it equal to the holders' valuation in each case—which is of course most efficiently accomplished by a property rule. (If it is set too high, i.e., higher than any holders' valuation, it may be irrelevant, with parties bargaining around it just as if they were subject to a property rule.)

The key point to notice is how sensitive bargaining is to the pricing of the liability rule. Precisely because it is so difficult to place a value on IPRs, we will seldom know if the price we set is the right one. Thus the difficulty of valuing intellectual property right entitlements adds a crucial dimension not found in the discussions of other entitlements. Consequently, we are best off if we stick to the accepted practice of letting the parties begin with property rule entitlements, contracting into liability rules where beneficial.

3. *Liability Rule Administration and the Problem of State Subsidy*

Liability rules in the intellectual property context differ from standard liability rules in another significant way. Most liability rules for intellectual property are created by the legislature, not by the courts. Premised on notions of market failure, these liability rules often come packaged with a state-supported administrative component. Because public money is used to establish an administrative organization, parties will take the benefits of this subsidy rather than spend their own money to bargain around the "free" liability rule. When transaction costs are taken into account, the liability rule yields more private gain than the property right, which provides inefficient incentives to private parties.²⁵ Although it might be possible to reach an identical bargain starting from either a property right or liability rule, a liability rule will be supe-

25. A similar point has been made even in the standard entitlements literature. See James E. Krier & Stewart J. Schwab, *Property Rules and Liability Rules: The Cathedral in Another Light*, 70 N.Y.U. L. REV. 440 (1995). Krier and Schwab criticize those who argue for the superiority of liability rules over property rules for implicitly assuming that the cost of setting the entitlement's price is low or zero. See *id.* at 453-55. In the IP cases of interest to me here, this is essentially true, if one forgets for a moment any expenses parties may incur in lobbying Congress regarding the shape of the liability rule. Thus, because liability rules come with subsidized organizations, these rules may be superior from the point of view of the parties. Ironically, however, in the case of the mechanical royalty or "cover" license, the liability rule and its administrative organization have numerous deficiencies. Thus, I agree strongly with Krier and Schwab: property rules are often superior.

rior where it lowers costs such as locating the other party to the bargain and negotiating an agreement. The savings in transaction costs will often overshadow whatever gains the parties might expect from bargaining over a property right or an unsubsidized liability rule system. This assumes, plausibly, that parties cannot “free ride” off the liability rule’s administrative apparatus, using it to lower initial transaction costs, then reaching a private bargain.²⁶

Under these circumstances only the property rule will induce private bargaining—contrary to Ayres and Talley’s assertion. Without private bargaining the entitlement must either be assigned initially to its most efficient holder or priced exactly right.²⁷ Assigning an entitlement to the most efficient holder is generally not possible in the complex field of intellectual property, where creative works have many uses requiring multiple transactions. Think of a copyrighted song: only if it is owned by a huge, vertically integrated media company can it reach radio, television, movies, and multimedia products; this is obviously rare. Pricing the entitlement perfectly is equally implausible; I have argued at length elsewhere that difficult valuation problems are intrinsic to intellectual property.²⁸ Private bargaining is therefore the only way intellectual property can be transferred efficiently. And, as established earlier, only property rule entitlements facilitate this bargaining.

B. Problems of Legislative Valuation

One key function of institutions in the intellectual property field is to perform what Calabresi and Melamed refer to as “collective valuation.” Those working within the Calabresi-Melamed framework generally associate collective valuation with liability rule entitlements. Collective valuation through a liability rule takes the place of the individual valuations reserved to the holders of property rule entitlements. Calabresi and Melamed generally assume that courts perform collective valuation. Thus their examples all involve judicially tailored liability rules. When they speak of the landholders whose land is to be used as a park, for instance, they describe eminent domain as the appropriate liability rule. Judges set the price for the entitlements in this and the other cases they discuss. What is more, a judge decides on the fair price

26. For example, consider a standard transaction involving government-run performing rights societies in Europe. The right holder first learns of a licensee’s interest in using a musical composition when the right holder receives a check. There is no mechanism for putting the parties in touch with each other. For a potential right user to negotiate directly with the right holder, the costs of the contact must be borne by the parties without help from the collective organization. These cost savings will often overshadow whatever private gains the parties might expect from bargaining around the liability rule.

27. See Polinsky, *Resolving Nuisance Disputes*, *supra* note 22, at 1075-80.

28. See, e.g., Merges, *supra* note 18, at 2658-59.

for each parcel of land. Thus the collective valuation mechanism envisioned by Calabresi and Melamed is administered by the courts, and is tailored to fit each individual case.

In the intellectual property field, however, the assumption of court valuation is unrealistic. IPR liability rules are set by Congress through compulsory licensing schemes and are not precisely-tailored valuations. As noted earlier, the fact that liability rules are established by the legislature and applied mechanically makes them susceptible to lobbying. Thus, these real-world liability rules have a political economy dimension not discussed in Calabresi and Melamed, at least where intellectual property rights are concerned.²⁹ This fact has immediate relevance for the task at hand.

One feature of legislation that is especially important is its likely permanence: once enacted, a statute is hard to change and hard to get rid of. As the next few paragraphs relate, this well-recognized feature of legislation is sufficient by itself to cast doubt on virtually all compulsory licenses. Thus, although there is some discussion at the end of this Section about the deformative effects of industry lobbying when a compulsory license is initially enacted, the nub of my argument goes to the *post-enactment stage*. This makes it easy to oppose a liability rule in this context. One might be entirely agnostic about, even supportive of, the merits of a compulsory license when enacted, and still oppose it because it will soon be irremediably outdated.

1. Case Study: The Compulsory License for Song "Covers"

The two shortcomings of legislative liability rules—questionable origins and creeping decrepitude—are readily apparent in the history of the mechanical compulsory license in copyright law. That history begins with the Supreme Court's 1908 ruling in *White-Smith Music Publishing Co. v. Apollo Co.* that player piano rolls were not "copies" of copyrighted music.³⁰ Congress responded by recognizing recording

29. Also, the political economy dimension adds an important consideration to the general theory of entitlements. Someone somewhere has to decide on the entitlement structure. Presumably, this will usually be the province of the legislature, which is the legal institution that ultimately would have to carry out the Calabresi-Melamed prescription in most cases. Observe how unusual eminent domain is in this respect: this entitlement is set in the Constitution. There is every reason to believe that the decision of which entitlement to grant will give rise to the same kind of lobbying discussed in the text, except that it will be to influence the property/liability rule choice in the first place, rather than the content of the liability rule once that entitlement form is chosen. It is not clear how taking this into account would impact the Calabresi-Melamed analysis, although it is hard to resist the urge to argue that it would severely complicate things. At the least, adding a political economy dimension to the decision over which entitlement to grant leads to speculation over the degree to which lobbyists would try to misrepresent the type and degree of transaction costs at work in a given situation. If one conceives of the entitlement structure as creating rents, like any legislation, there is every reason to believe parties will spend money to influence that structure (or seek that rent).

30. 209 U.S. 1 (1908).

and mechanical reproduction rights as within the bundle of rights secured by copyright law.³¹ The 1909 Act, however, reflected congressional concern with the potential market power conferred by virtue of the new right: under the Act, any manufacturer of recordings or mechanical reproductions could use any musical composition without first obtaining a license directly from the holder of the copyright in the composition. There were only two requirements: the composition must have already been licensed for mechanical reproduction to someone, and the piano roll manufacturer had to pay a statutory royalty to the copyright owner.

The new statute grew out of competitive conditions in the piano roll market. In 1909, one piano roll firm, the Aeolian Company, dominated the industry.³² At the behest of Aeolian's competitors,³³ Congress instituted the mechanical compulsory license to prevent this new right from radically augmenting Aeolian's market power. The compulsory license was described explicitly as a "compromise"—neither a strong property rule nor a complete abdication of protection.³⁴ Representative songwriters, music publishers, and piano roll manufacturers even joined forces to arrive at the statutory royalty rate: two cents per song per roll.³⁵ With this innocent compromise began the long, desultory career of the so-called "mechanical license."

Even in 1908 there were doubts about the monopolistic power of the Aeolian Company.³⁶ These doubts were soon realized; hundreds of competitors sprang up, a few of them apparently specializing only in "cover" versions of original Aeolian songs. The new competition effectively mooted the original rationale for the license.³⁷ Not sur-

31. Ch. 320, § 1(e), 35 Stat. 1075 (1909), now superseded by 17 U.S.C. § 115 (1988) (providing that any copyright owner who licenses a work for reproduction is subsequently subject to compulsory licensing of that work).

32. See AL KOHN & BOB KOHN, *THE ART OF MUSIC LICENSING* 310-12 (1992).

33. Harry G. Henn, *The Compulsory License Provisions of the U.S. Copyright Law*, reprinted in *COPYRIGHT LAW REVISION, 86TH CONG., 1ST SESS., STUDIES PREPARED FOR THE SUBCOMM. ON PATENTS, TRADEMARKS AND COPYRIGHTS OF THE SENATE COMM. ON THE JUDICIARY 3* (Comm. Print 1960):

John J. O'Connell, as representative of several New York player-piano manufacturers, claimed at the hearings that the [proposed right to make mechanical copies] would give a monopoly of the music-roll business to [Aeolian].

34. ALFRED M. SHAFTER, *MUSICAL COPYRIGHT* 331 (2d ed. 1939).

35. Henn, *supra* note 33, at 5.

36. *Id.* at 4.

37. See RALPH S. BROWN & ROBERT C. DENICOLA, *COPYRIGHT* 496 (6th ed. 1995); see also Henn, *supra* note 33, at 45:

There is a constantly changing roster of approximately 1,000 music recording companies, societies, and producers in the United States, ranging from large-scale, well-established leaders of the industry, like RCA Victor, Columbia, Capitol, Decca, MGM, Mercury, and London, to relatively insignificant producers. In 1954 these 7 large firms accounted for 85 percent of the dollar volume of business; 25 others for an additional 10 percent; 5 percent of the volume being distributed among the remaining producers.

prisingly the record companies had come to rely on the license as a cheap source of material. Despite the almost immediate cries from knowledgeable observers that it was distorting the market for compositions,³⁸ the mechanical license statute has never been repealed, and has rarely been changed.

The market distortion effect of the compulsory scheme cannot be seriously disputed; the two-cent royalty stayed constant from 1909 until 1978. And, since the statutory rate acts as a ceiling,³⁹ the actual "going rate" was lower; it remained at between 1 1/4 and 1 3/4 cents during this period.⁴⁰ Thus the price of a key input in the music recording industry stayed constant from the era of crank-handle Victrolas to the era of quadrophonic stereo and digital recording! The current rate is 6.95 cents in most cases;⁴¹ and songwriters, bargaining in the shadow of the compulsory license, typically receive less than five cents.⁴² Although

Industry structure has seemingly remained the same since this report. See David E. Kronemyer and J. Gregory Sidak, *The Structure and Performance of the U.S. Record Industry*, in ENTERTAINMENT PUBLISHING AND ARTS HANDBOOK (John D. Viera & Robert Thorne, eds., 263, 266 (1986) ("A surge in demand for prerecorded music in the late 1950s and middle 1960s spawned numerous labels."); I THOMAS D. SELZ, ET AL. ENTERTAINMENT LAW § 1.05 (2d ed. 1992), ("In the area of recorded music, there appear to be dozens of different record labels," although the top six or so firms have somewhere near 90% of the market share).

38. See Henn, *supra* note 33, at 53 (footnote omitted):

Without the compulsory license provision, an exclusive license could be negotiated at substantially higher royalty rates, or even non-exclusive licenses might be negotiated at higher royalty rates in the absence of a statutory ceiling.

See also COPYRIGHT LAW REVISION, 87TH CONG., 1ST SESS., REPORT OF THE REGISTER OF COPYRIGHTS ON THE GENERAL REVISION OF THE U.S. COPYRIGHT LAW 35 (House Comm. Print 1961):

Removal of the compulsory license would be likely to result in a royalty rate, fixed by free negotiation, of more than the present statutory ceiling of 2 cents. The record companies would, of course, lose the advantage of the lower rate. . . . [W]e would conclude that the 2-cent ceiling denies authors and publishers the compensation due them for the use of their works.

39. *Id.* The mechanical compulsory license provides an excellent example of the theoretical point made earlier. If a copyright holder got into the business of paying firms not to make a cover version of the copyrighted song, every firm would suddenly show an interest in making such a version. There is therefore no way for the copyright holder to effectively bargain to a price higher than the statutory compulsory licensing rate. Hence that rate acts as a ceiling. Bargaining below the statutory rate is explained *supra* note 22 and accompanying text.

40. See Henn, *supra* note 33, at 35 (quoting figures recited by recording industry member at 1947 hearings, said to be in effect since at least 1932).

41. See 37 C.F.R. § 255.3(h) (effective Jan. 1, 1996).

42. See Richard C. Wolfe, *Recording Artist's Royalties: A Contract Primer (Part One)*, ENT. L. & FIN., Sept. 1994, p. 1:

Most recording artist agreements provide for a reduction in the statutory mechanical rate, typically to 75 percent of the minimum compulsory license rate. Some record companies may also negotiate to pay the mechanical rate on less than 100 percent of the compositions on an album (e.g., pay mechanicals on only 10 singles, notwithstanding the fact that there may be more than 10 compositions on an album). If the recording agreement provides that the maximum aggregate mechanical royalty will not exceed three-fourths of the statutory rate, and if, in fact, the artist is unable to obtain a three-fourth rate when he or she decides to record another songwriter's work, then 25 percent of the

Congress in the 1976 Copyright Act delegated limited power to adjust royalty rates to the Copyright Royalty Tribunal, a quasi-administrative body, rates increased only moderately. Industry participants and others complained so vociferously about the Tribunal that it was eliminated in 1994. It has been replaced by ad hoc arbitration panels that will theoretically be more responsive to industry. There is little prospect, however, that even this new system will mirror the functioning of a market or market-based institution.⁴³

Even if the new arbitration panels manage to choose efficient outcomes, we should still be wary of the compulsory license approach. The ludicrous persistence of the rate set at the urging of John Phillip Sousa⁴⁴ into the era of Frank Zappa teaches a valuable lesson about the shortcomings of compulsory licenses. The problem arises not so much from the monitoring and royalty-dividing process, but rather is found in the fixed (or inflexible) royalty rates. Even though mechanical royalty transactions are largely handled by private entities, most notably the Harry Fox Agency in New York,⁴⁵ the mere presence of the administrative apparatus does not demonstrate that the current liability rule entitlement equals or surpasses the performance of a hypothetical institution based on property rule entitlements.⁴⁶ The compulsory license, an example of "collective valuation" via legislation (in the mold of Calabresi and Melamed), lacks the fundamental earmark of a viable private transactional institution: a responsive valuation mechanism.

mechanical rate paid to the outside songwriter and his publishing company will actually be taken as a deduction against the artist's royalties.

43. The statute imposes limits on the rate adjustment process. 17 U.S.C. § 801(b)(2)(A) (1978 & Supp. 1995) (limiting cable rate increases under some circumstances). The administrative procedure permits the Librarian of Congress to override the arbitrators' awards. 17 U.S.C. § 803 (1978 & Supp. 1995).

44. Sousa marched into Congress, along with Victor Herbert of ASCAP fame, complaining that composers were not getting one cent from sellers of piano rolls. Congress saw him and raised him a cent. See Henn, *supra* note 33, at 3.

45. KOHN & KOHN, *supra* note 32, at 319-20.

46. Indeed, it seems absurd to argue, as some do, that the mechanical compulsory license is still necessary to cut down on transaction costs. See Ken Anderson, *Preserve the Compulsory License*, BILLBOARD, June 11, 1994, at 6:

[t]here will be an enormous transactional cost to everyone in the industry in negotiating new rates and resolving disputes if the compulsory license is abolished. The cost will be greatest if there is no regulatory system with jurisdiction to settle disputes and set mechanical rates.

What this misses is that the Fox Agency will presumably step right in to facilitate private bargaining, simply adding to the current services it offers. See *Oversight of the Patent and Trademark Office: Hearing Before the Subcomm. on Patents, Copyrights and Trademarks of the Senate Comm. on the Judiciary*, 104th Cong., 1st Sess. 21 (1995) (statement of Edward P. Murphy, President and Chief Executive Officer, National Music Publishers' Association, parent of the Harry Fox Agency) ("The Harry Fox Agency, Inc. ("HFA"), represents more than 13,000 music publishers and licenses a large percentage of the uses of music in the United States on records, tapes and CDs.").

In short, due to the difficulty of rooting out a compulsory license, the song industry is locked into a suboptimal liability rule.⁴⁷ And it is not alone: cable television program suppliers⁴⁸ and providers of music for jukeboxes⁴⁹ can also tell similar tales of long-running battles against long-outdated compulsory licenses. This persistence should not be a surprise; studies in the public choice tradition predict just such a status quo bias.⁵⁰ Although it is of course not impossible for music publishers and composers to eliminate the license from the statute, the recording companies seem to have at least enough political muscle to block these efforts.⁵¹ Indeed, it is a well-accepted precept in the intellectual property

47. See Ralph Oman, *The Compulsory License Redux: Will It Survive in a Changing Marketplace?*, 5 CARDOZO ARTS & ENT. L.J. 37, 48 (1986) (arguing that Congress has not made copyright reform a priority and noting that abolishing compulsory licenses would "dramatically alter the relationships between the parties").

48. See, e.g., Stanley M. Besen et al., *Copyright Liability for Cable Television: Compulsory Licensing and the Coase Theorem*, 21 J.L. & ECON. 67 (1978); Robert Stephen Lee, *An Economic Analysis of Compulsory Licensing in Copyright Law*, 5 W. NEW ENG. L. REV. 203 (1982); Lorna Veraldi, Note, *Cable Television's Compulsory License: An Idea Whose Time Has Passed?*, 25 N.Y.L. SCH. L. REV. 925 (1980).

49. The jukebox compulsory license, which had also become outdated, proved very hard to eliminate as well. Like record companies, jukebox proprietors were well organized politically. See BROWN & DENICOLA, *supra* note 37, at 540:

Attempts to repeal the [jukebox license] were frequent but unsuccessful. The operators who supply the machines and the taverns and other establishments who by custom get half the take constituted a broad political base, in contrast to the concentration of the popular music industry in a few urban centers. They also had the advantage of the status quo.

But see Scott M. Martin, *The Berne Convention and the U.S. Compulsory License for Jukeboxes: Why the Song Could Not Remain the Same*, 37 J. COPYRIGHT SOC'Y U.S.A. 262 (1990). Martin describes the recent negotiated agreement between the collective rights societies and the jukebox trade group for a voluntary licensing system in light of changes to U.S. copyright law necessitated by U.S. adherence to the main international copyright union, the Berne Convention.

50. These studies stress that democratic political institutions are designed to make it difficult to enact legislation, to counteract the inherent instability of pure majoritarian rule. See, e.g., Daniel A. Farber & Phillip P. Frickey, *The Jurisprudence of Public Choice*, 65 TEX. L. REV. 873, 901-06 (1987) (describing structural and rule-based constraints on the legislative process that enhance stability).

51. Scott L. Bach, Note, *Music Recording, Publishing, and Compulsory Licenses: Toward a Consistent Copyright Law*, 14 HOFSTRA L. REV. 379 (1986) is especially informative:

During the early stages of the movement for copyright law revision, the basic question of whether to retain or eliminate compulsory licensing was a major issue. The Register of Copyrights initiated the debate in 1961 by recommending that Congress eliminate the compulsory license provision altogether. Although this recommendation generally met with favorable reaction from scholars, authors, composers, and members of the copyright bar, these reactions were "drowned in a sea of protests from the recording industry." In 1965, the Register of Copyrights reversed his position, and by 1976, the elimination of compulsory licensing was no longer an issue.

Id. at 390 (footnotes omitted) (citing Note, *Compulsory Licensing of Musical Compositions for Phonorecords Under the Copyright Act of 1976*, 30 HASTINGS L.J. 683, 693 (1979)). At least one experienced witness to the political economy of IPRs recognizes this: in a recent speech, Representative William Hughes, former Chair of the House Subcommittee on Intellectual Property, observed that

I have explored ways to repeal the compulsory licenses but have not met with great success yet. Hope springs eternal, though.

field that "U.S. intellectual property law is extremely difficult to change. . . . In Washington, it is much easier to stop a bill than to move one through the legislative maze, and any party that feels short-changed can exercise virtual veto-power."⁵²

The difficulty of dislodging compulsory licenses even in the face of radically changed circumstances is one of the primary reasons to favor voluntary institutions over Congressional legislation. There are two other reasons as well, both a function of initial structure rather than creeping obsolescence. The first is that some sets of actors in the IPR field, as elsewhere, possess (or did in the past) a degree of influence in the legislative arena that is disproportionate to their economic leverage in purely private transactions, including bargaining over private institutional design.⁵³ The resulting statutes give these parties a better deal than they could negotiate directly. Commentary on bargaining under the mechanical compulsory license shows this dynamic at work.⁵⁴ As an

There are various reasons for this present lack of success, depending upon which license we are talking about. There is, though, one common thread: some companies, after having adapted to life under a compulsory license, are more comfortable with the devil they know than with the devil they don't. I understand this. But it is interesting that business people who complain about government interference seem reluctant to live in a free copyright market.

William Hughes, Speech of Rep. William Hughes to Copyright Society of the U.S.A. (Oct. 7, 1993), in 46 PAT. TRADEMARK & COPYRIGHT. J. (BNA) 526, 527 (1993).

52. Ralph Oman, *Intellectual Property After the Uruguay Round*, 42 J. COPYRIGHT SOC'Y U.S.A. 18, 21-22 n.8 (1994). See also Thomas P. Olson, *The Iron Law of Consensus: Congressional Responses to Proposed Copyright Reforms Since the 1909 Act*, 36 J. COPYRIGHT SOC'Y 109 (1989) (arguing on the basis of extensive historical evidence that intellectual property legislation needs a broad consensus before Congressional leadership will bring it to the floor for action). See generally GUIDO CALABRESI, *A COMMON LAW FOR THE AGE OF STATUTES* (1982) (arguing that courts should develop common law techniques for dealing with outdated statutes that have never been repealed).

53. On this point, see ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* 213 (1990) (citations omitted):

If someone else agrees to pay the costs of supplying new institutions, it is difficult to overcome the temptation to free-ride. Then the problem for some appropriators is how to present the "facts" of the local situation in such a way that officials who may not know the local circumstances will be led to create institutions that will leave some individuals better off than others. Those individuals who have the resources to enable them to make the best case to external officials are most likely to gain rules (or exceptions to rules) that will advantage them the most.

On the effects of concentrated political power in the legislative arena, see RICHARD A. POSNER, *THE FEDERAL COURTS* 271 (1985) (describing "the shift in scholarly thinking about legislation from a rather naive faith in the public-interest character of most legislation to a more realistic understanding of the importance of interest groups in the legislative process"); Jonathan R. Macey, *Promoting Public-Regarding Legislation Through Statutory Interpretation: An Interest Group Model*, 86 COLUM. L. REV. 223 (1986) (account of legislative process describing pervasive influence of private interest groups). Cf. Frank H. Easterbrook, *The Supreme Court 1983 Term—Foreword: The Court and the Economic System*, 98 HARV. L. REV. 4, 15 (1984) (describing view of legislation as one where "the judge treats the statute as a contract. He first identifies the contracting parties and then seeks to discover what they resolved and what they left unresolved.").

54. See Blaisdell, *Compulsory License*, reprinted in J. GROSSMAN, *OMNIBUS COPYRIGHT REVISION: LEGISLATIVE HISTORY* (1960) at 106, 109:

example, radio stations made several legislative assaults on ASCAP in its early days, for the avowed purpose of circumventing its growing economic clout. Though ultimately unsuccessful at the federal level,⁵⁵ these efforts, and others like them, show the radio interests rent-seeking at a furious pace, or at least finessing private bargaining by political means. Other examples illustrate the same theme.⁵⁶ Taken as a whole, these events militate in favor of a simple guideline: when private contracts or

If the compulsory license were abolished the owner of copyrighted musical material, i.e., usually the music publisher, would be freed from three limitations under which he now labors in negotiating for the licensing of such material.

(1) He could limit the licensing to those individuals he desired to deal with.

(2) He could limit the time period for licensing the material.

(3) He could negotiate freely as to the price to be paid for the use of the material. * * *

[T]he contending parties in the record production industry currently subject to compulsory license are not of unequal stature. In the absence of a compulsory license, the relatively equal strength of the two groups would tend to assure a fair basis for bargaining while the number of strong companies on each side would tend to maintain competitive conditions within each group.

55. Radio broadcasters met with some success at the state level, however. By 1937, statutes outlawing or materially restricting ASCAP were passed in five states. *See* 1937 Fla. Laws ch. 17807; 1937 Mont. Laws, ch. 90; 1937 Neb. Laws, ch. 138; 1937 Tenn. Pub. Acts, § 7912(5); 1937 Wash. Laws, ch. 218. This shows that in certain states the radio interests had more political influence than ASCAP, which is not surprising given that radio stations were local and ASCAP was a remote national entity. *See* Marcus Cohn, *Music, Radio Broadcasters and the Sherman Act*, 29 *GEO. L.J.* 407, 416-19 (1941); Robert Israel Goodman, Comment, *Music Copyright Associations and the Antitrust Laws*, 25 *IND. L.J.* 168, 173-76 (1950); Note, *Musical Monopolies and Legislative Control*, 53 *HARV. L. REV.* 458, 459 n.13 (1940) [hereinafter Note, *Musical Monopolies*].

Recent events show that this dynamic is still at work; several states have passed new statutes restricting ASCAP's licensing and enforcement practices. *See Copyrights: Conditional Order Would Relieve ASCAP of Licensing Obligations in New Jersey*, 49 *PAT. TRADEMARK & COPYRIGHT J.* (BNA) 731, 732 (describing statutes regulating ASCAP in Montana, Virginia, West Virginia, and Wyoming). *But see* *American Soc'y of Composers, Authors, and Publishers v. Pataki*, 38 *U.S.P.Q.2d* (S.D.N.Y. 1996) (holding that one such statute enacted in New York was preempted by federal copyright law).

56. For an example of an apparent lobbying success story along these lines, see Veraldi, *supra* note 48, at 937-38, 950 (footnotes omitted):

One hundred witnesses appeared to testify at House hearings on the copyright law revision in 1975. Cable operators, program producers, and broadcasters were well represented. . . .

. . . [T]he cable industry had a sympathetic audience for its testimony about the impact various fee schedules might have on investments needed to finance cable innovation.

. . .

[W]ould retransmission consent be practical, or would costs of negotiating per-program payments exceed the value of cable's use of the programs? Both cable operators and program suppliers so far have felt that under present circumstances the cost of such transactions would be prohibitive. Admittedly, little is known about what such costs actually might be.

Besen et al., *supra* note 48, argue that in fact the transaction costs would have declined with experience, making a private institutional arrangement feasible. One copyright expert complained of the sheer magnitude of expenditures by lobbyists trying to influence the compulsory license fees in the Copyright Act of 1976. *See* Paul Goldstein, *Preempted State Doctrines, Involuntary Transfers and Compulsory Licenses: Testing the Limits of Copyright*, 24 *UCLA L. REV.* 1107, 1110 (1977) (estimating that 32% of the record of the legislative history for the 1976 hearings was related to compulsory license fees, this in a very comprehensive revision bill, the first fundamental restatement of copyright law since 1909).

institutions are a viable alternative, bargaining should be channeled out of the legislative arena.⁵⁷ ASCAP and kindred organizations suggest this will often be the case with IPRs in a repeat-play setting.

Perhaps this sense of the comparative inferiority of legislation lies behind the shared belief that legislation, in the IPR field at least, should not normally be directed at specific industries.⁵⁸ Such a norm favoring only generalized legislation constrains legislators and lobbyists in their efforts to craft solutions to transactional impasses involving IPRs. Of course, private institution-building, by comparison, thrives on this very sort of industry-specific initiative.

The lesson of the mechanical license and other compulsory licenses is that they were not an effective solution to the problem of high transaction costs.⁵⁹ Although it might function as an effective solution under different circumstances, such as in the case of remote satellite TV users,⁶⁰

57. *But cf.* Jessica Litman, *Copyright Legislation and Technological Change*, 68 OR. L. REV. 275 (1989) (arguing that copyright legislation is so complicated Congress delegates it to industry representatives anyway). The theory that Congress merely "ratifies" industry deals in the copyright area could be read as asserting that the kinds of institutions I advocate in the text are never necessary, since they will end up being embodied in the Copyright Act. I find this view naive on two counts. First, the history (indeed, existence) of institutions such as ASCAP belies it; why would there be an ASCAP if the radio industry, composers' groups, and music publishers could get Congress to pay some of its administrative costs via a legislative deal? Second, although copyright legislation may be an appropriate way to institute "grand bargains" among many interests, it would appear difficult to control the legislative agenda thoroughly enough to keep a limited deal, involving a small industry or only part of an industry, from being undermined by the addition of input from consumers of the industry's products (where they are organized), or other members of the industry. A bill to establish a clearinghouse for photographers' photos and copyrights, for example, would soon receive input from the magazine industry, potentially upsetting the original parameters of the deal. Indeed, Litman herself notes occasions when copyright negotiations collapsed. *See, e.g., id.* at 279.

58. *See* Olson, *supra* note 52 (arguing that only when numerous interest groups agree is legislation allowed to proceed). Consider these remarks concerning a bill designed to address certain patentability problems peculiar to the biotechnology industry:

[Professor] Donald S. Chisum, appearing on behalf of the American Intellectual Property Law Association, agreed with [Intellectual Property Owners Inc.'s representative William F.] Marsh that HR 1417 is not needed. It could damage the patent system's credibility by implying that certain classes of patent claims are immune from full PTO examination and are subject to a weaker patentability standard, he cautioned.

Biotech Process Patent Bill Is Debated Before House Panel, 43 PAT. TRADEMARK & COPYRIGHT J. 63 (1991). *See also Patent Extension Hearing: Hearings on S. 526, S. 1165 and S. 1506 Before the Subcomm. on Patents, Copyrights and Trademarks of the Senate Comm. on the Judiciary*, 102d Cong., 1st Sess. 199 (1991) (statement of Professor Robert P. Merges) ("Patents issue every day for devices ranging from the proverbial mousetrap to superconductors and man-made organisms. . . . In the eyes of the patent system . . . all inventors are created equal. . . . Indeed, it is this equal treatment which distinguishes a true patent system from a series of *ad hoc* awards to inventors.").

59. For comparative support, see Joanne Court, *The Notional Bargain Approach to the Determination of Equitable Remuneration for Compulsory Licenses: A Comment on Four Decisions of the Copyright Tribunal*, 11 SYDNEY L. REV. 348 (1987) (describing incoherence of process under Australian law for determining blanket compulsory license royalty rates).

60. As noted earlier, the likelihood that a voluntary, consensual clearance mechanism will arise is a critical factor in deciding whether to enact compulsory licensing provisions. Where such consensus is not likely to emerge, the relevant interest groups can be expected to lack a cohesive

the diversity and flexibility of the institutional responses studied in this paper counsel against immediate adoption of a rigid legislative liability rule.

2. *Transaction Costs and Judicial Liability Rules*

While the legislative liability rules described above are inferior to property rules, one might nonetheless argue that the legislature should have implemented a judicially-administered liability rule, consistent with the teachings of Calabresi and Melamed. Such rules can be found in certain corners of foreign intellectual property systems, such as "blocking patents." In some countries, the holder of an improvement (or "subservient") patent has the right to license a pioneering (or "dominant") patent if a license is necessary to implement the improvement.⁶¹ Clearly such a rule dispenses with the political economy issues outlined above. It might well be that it is the appropriate model for all intellectual property-related liability rules.

There is some merit to such an argument, under the right circumstances. As I have argued elsewhere, the risk of "bargaining breakdown" in the improvement-pioneer licensing negotiations is real enough.⁶² A liability rule prevents the social welfare loss that would result from such a breakdown. My preferred remedy in this situation is to modify property rule entitlements so as to increase slightly the risk that the improver can escape entirely from the pioneer's property right. Still, I do recognize the arguments for liability rule entitlements de-

legislative strategy. Two features follow from this. First, Congress, which often simply responds to industry and user pressures when shaping intellectual property legislation, will have to take a more active hand in the creation and shepherding of compulsory license provisions. And second, the usually forceful "capture" dynamic, whereby a well-organized interest group designs legislation to line its coffers at the expense of society at large, may well be less in evidence in these cases. Thus, assuming that the threshold determination is made with care, the legislation resulting from this process is less likely to reflect industry needs only.

61. See, e.g., Patent Law, Law No. 68-1 (1968), amended by Law No. 90-1052 (1990) (Fr.), in 3 WORLD INTELLECTUAL PROPERTY ORGANIZATION, INDUSTRIAL PROPERTY LAWS AND TREATIES, §§ 32-41 (1980 & Supp. 1991); Japanese Laws Relating to Industrial Property, Published by the Japanese Group of AIPPI, 1988 Revision, Articles 83(1) and 93; Tetsu Tanabe & Harold Wegner, Japanese Patent Laws § 833 (1979); Patent Law No. 121 (1959), amended by Law No. 27 (1987) in 4 WORLD INTELLECTUAL PROPERTY ORGANIZATION, INDUSTRIAL PROPERTY LAWS AND TREATIES (1980 & Supp. 1991); see also Walter, *Compulsory Licenses in Respect to Dependent Patents Under the Law of Switzerland and other European States*, 21 INT'L REV. INDUS. PROP. & COPYRIGHT L. 532, 533 (1990); Patents Act of the Kingdom of the Netherlands (1910), amended by The Act of the Kingdom of the Netherlands (1987) (Rijksocrooiwet) § 34, in 5 WORLD INTELLECTUAL PROPERTY ORGANIZATION, INDUSTRIAL PROPERTY LAWS AND TREATIES (1980 & Supp. 1991); New Zealand Patent Act §§ 46, 51 (1953), in BROWN & GRANT, THE LAW OF INTELLECTUAL PROPERTY IN NEW ZEALAND § 6.67 (1989).

62. See Robert Merges, *Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents*, 62 TENN. L. REV. 75 (1994).

signed to lower the bargaining-oriented transaction costs present in the situation.

But the costs of strategic bargaining are far different from the costs of transactions in markets where multiple IPRs are needed as inputs. Input markets are notable especially for the repeated costs of locating right holders and negotiating individual licenses. And, with respect to these negotiations, the single most difficult issue—and hence the most costly to resolve—is the valuation of each unique IPR.

Where these volume-related transaction costs are concerned, judicially-administered liability rules are not of much help. Litigation might well be a frequent occurrence, given the valuation problem. Litigation costs would have to be added to the list of relevant transaction costs. And, to be sure, one component of this cost would be expenditures made to influence the judge's valuation decision. The costly parade of experts one often sees in the damages phase of intellectual property litigation would no doubt become commonplace in these licensing disputes. Unless a special "rate court" were established to administer these disputes, each judge in each case would have to be educated about the industry, about appropriate IPR valuation ranges, and the like. These costs would clearly be large, and as mentioned earlier the nature of intellectual property makes it impossible for parties to bargain around liability rule entitlements in all cases.⁶³ For these reasons, it might well turn out that a court-based liability rule would be a third-best solution, after property rights and statutory compulsory licenses. At least these two alternatives conserve on the volume-related transaction costs that are the gist of the problem.

Given the drawbacks of both a legislatively and a judicially administered liability rule for intellectual property, we turn our focus to private institutions that could create private "liability rule" systems.

C. *Lessons from the "New Institutionalism" Literature*

Calabresi and Melamed advance a polarized approach to the initial assignment of rights. Their framework posits a world with only two scenarios: either the legislature issues property rights,⁶⁴ or it establishes

63. See *supra* note 23 and accompanying text.

64. Actually, Calabresi and Melamed do not dwell at length on whom they envision as the appropriate body to implement their framework. But it is a fundamental premise of our legal system that legislatures set entitlements, and it is quite clear from their discussion of non-efficiency considerations in the setting of entitlements—particularly "distributional goals"—that Calabresi and Melamed envision the legislature as the body that crafts entitlements. See Calabresi & Melamed, *supra* note 9, at 1093-1101. On the other hand, when they speak of liability rules, usually under the rubric of situations calling for "collective valuation," they often imply that either courts or legislatures could be used to administer them. *Id.* at 1122-23 n.62. Legislatures may be the appropriate institution for applying a liability rule in some situations, e.g., where a neighbor has the right to buy a polluter's right to pollute, subject to liability rule compensation. *Id.* at 1116. At times, then, Calabresi and

a liability rule (through what the authors call "collective valuation"). They do not, however, discuss the many *non-legislative* forms of "collective valuation" that a property rule can call forth. The institutions studied in this Article are examples of a host of such private forums for valuation and transfer of property rights that do not rely directly on the state to carry out their coordinating function. In theoretical terms, this Article seeks to integrate the insights of the modern literature on economic institutions into the Calabresi-Melamed framework by looking for ways in which initial entitlements might be used to channel post-assignment behavior. I also examine a few institutional arrangements to determine whether formal rights are needed at all.

The active investment in creation of collective institutions highlights another gap in our understanding of entitlements. Most writing on property rights theory treats enforcement techniques and technologies as either exogenously determined or subject to only minor optimization.⁶⁵ These techniques and technologies are not necessarily considered static, but rather just as more or less given.⁶⁶ My point is twofold: institutions are enforcement technologies too, and they are often generated intentionally to reduce transaction costs and to increase the value of assets. To the extent institution-building investment is pervasive, we in the legal academy need to incorporate the possibility of

Melamed's article appears to collapse two different issues—who *administers* entitlements versus who *sets* them—into a single discussion. While this Article follows this practice at times, the overall goal is to focus more intently on the initial entitlement stage.

65. See, e.g., YORAM BARZEL, *ECONOMIC ANALYSIS OF PROPERTY RIGHTS* 73-74 (1989) (discussing two limited techniques for reducing measuring and policing costs: exploitation of economies of scale in measuring product attributes, and elimination of duplicate measurements); GARY D. LIBECAP, *CONTRACTING INTO PROPERTY RIGHTS* 16-17 (1989) (discussing incentives to define property rights more precisely after external shocks such as changes in factor prices, production costs, enforcement technology, or political parameters); Harold Demsetz, *The Exchange and Enforcement of Property Rights*, in *Ownership Control of the Firm* 31, 41 (1988) (describing as "methods which will arise in the market and which will lower the required police cost," vertical integration and bundling of hard-to-police commodities with others that are not); Robert Ellickson, *Property in Land*, 102 *YALE L.J.* 1315, 1320 n.14 (1993) (treating the land regime "as a dependent variable that is affected by technologies, scale efficiencies, risks, ideologies, and other variables regarded as independent"). Libecap comes closest to my interpretation of institution formation as a response to high transaction costs. He emphasizes incentives to change property rights (including enforcement techniques) in the political arena. Yet his focus on the legislature as the primary source of enforcement techniques differs substantially from my emphasis on non-legislative institutions.

66. Consider, for example, the canonical instance of barbed wire which, once developed, changed the dynamics of western land use and hence the value and nature of property rights in western land. For example, the fine recent article by Robert Ellickson includes this discussion:

The efficiency thesis predicts that innovations in technologies for marking, defending, and proving boundaries lead to more parcelization because they reduce the transaction costs of private property regimes. According to this view, for example, Glidden's invention of barbed wire in 1874 should have stimulated more subdivision of rangeland in the American West. And this indeed appears to have occurred.

Ellickson, *supra* note 65, at 1330 (footnote omitted).

endogenous enforcement “technologies”—including institutions—into our analysis of property rights.⁶⁷

Only *repeated* transactions among right holders will give rise to the private institutions discussed in this Article. One-shot or sporadic interactions do not justify investments in exchange institutions. Numerous scholars have been fascinated with the tendency of repeated interactions to coalesce into various forms of private ordering.⁶⁸ Robert Ellickson has described how informal (i.e., non-legal) behavioral norms can emerge out of repeated interactions among members of close-knit communities.⁶⁹ Of course, the communities Ellickson studied differ from the IPR institutions, which are embedded in an industrial milieu and are therefore more concerned with shorter-term self-interest.⁷⁰ Because of this difference, Ellickson’s principal finding—that community members disregard formal legal entitlements in favor of informal norms—is not duplicated in the institutions studied in this Article.

Even so, similar forces lead community members to develop cooperative norms and push firms into collective IPR institutions. Repeat interaction is the most significant.⁷¹ In some institutions, such as ASCAP, the need for many dealings with copyright licensees (and infringers) brought right holders together. Internal governance rules and economies of scale in enforcement combined to lower drastically the transaction costs of administering these rights. Patent pools facilitate licensing and royalty splitting, and also extensive cross-licensing *among members*. These centralized institutions both bundle rights and settle accounts among members.

Initial legal entitlements matter very much. But the pressure of numerous transactions produces norms that in effect modify the initial entitlements. In his study, Ellickson concluded that informal norms were paramount. This Article concludes in similar fashion that semi-formal arrangements (or re-arrangements) dominate in the IPR arena. In both cases, repeat interactions drive these arrangements.

67. Douglass North has made a similar point. See DOUGLASS C. NORTH, INSTITUTIONS, INSTITUTIONAL CHANGE AND ECONOMIC PERFORMANCE 33-35, 46-48, 56-60 (1990). There are some stirrings in this direction in the legal literature. See e.g., Stephen Craig Pirrong, *The Efficient Scope of Private Transactions-Cost-Reducing Institutions: The Successes and Failures of Commodity Exchanges*, 24 J. LEGAL STUD. 229 (1995) (review of successful and unsuccessful commodity exchange organization efforts).

68. See, e.g., THE NEW INSTITUTIONALISM IN ORGANIZATIONAL ANALYSIS (Walter W. Powell & Paul J. DiMaggio eds., 1991).

69. ROBERT C. ELICKSON, ORDER WITHOUT LAW: HOW NEIGHBORS SETTLE DISPUTES 164-66 (1991).

70. For an exploration of the generality of Ellickson’s findings, see Robert P. Merges, *Among the Tribes of Shasta County*, 18 L. & Soc. INQUIRY 299 (1993) (reviewing ELICKSON, *supra* note 69).

71. This is a crucial aspect of the models Ellickson relies on to explain the norms he observed. See ELICKSON, *supra* note 69, at 167.

While Ellickson is one of the few legal scholars to focus on cooperative norms, an important group of economists has been hard at work in recent years studying the closely related phenomenon of institutions. This "new institutional economics" furnishes a useful set of concepts for helping to understand IPR institutions. In particular, I provide a detailed discussion of Elinor Ostrom's work,⁷² one of the best examples of this inductive branch of social science. Her research documents the incremental evolution of private institutions from origins often no more complex than simple bilateral contracts. The "new institutional" approach will help us understand our later discussion of the emergence of private IPR institutions.

The new institutional economics seeks to describe the formation and function of private institutions. The accounts provide detailed descriptions of specific schemes designed to overcome the crucial triad of transaction costs: valuation, monitoring, and enforcement.⁷³ Although valuation is important in the Calabresi-Melamed Framework, the rubric of "collective valuation" assigns complex group valuation (and hence, implicitly, monitoring and enforcement) to government agencies working off-stage. The institutional literature, in its discussion of valuation, monitoring, and enforcement, fleshes out this aspect of the bare bones Calabresi-Melamed Framework.⁷⁴

The new institutionalism addresses first the basic entitlements given to economic actors in the spirit of Calabresi and Melamed. It goes further, however, and describes how entitlements contribute to, and become embedded in, the norms and organizations that structure economic relationships. As in the entitlements literature, the new institutionalism takes transaction costs as the central organizing principle, but it has a more comprehensive approach to transaction costs. Entitlements theorists limit their conception of transaction costs to those that bear on which type of entitlement to grant; they are therefore only concerned with the narrow subset of transaction costs that stem from strategic bargaining.⁷⁵

72. See OSTROM, *supra* note 53.

73. These concepts were first elaborated in the abstract in important theorizing about property rights. For significant contributions in this vein, see Harold Demsetz, *The Exchange and Enforcement of Property Rights*, in 1 OWNERSHIP, CONTROL AND THE FIRM (1988); BARZEL, *supra* note 65. See also EGGERTSON, *supra* note 16, at ch. 2, pp. 33-50, ch. 8, pp. 247-311. One vision of the new institutionalism is that it is testing and applying these concepts in the real world of property rights and economic organizations.

74. It is important to point out that Calabresi and Melamed did not set out to state an earth-shattering "Framework"; their piece was modestly titled, after all, "One View of the Cathedral." The straightforward points they made turned out to be so timely, in the sense of providing a vital vocabulary for a whole range of interesting problems, that they were quickly interpreted as having made a broad theoretical statement.

75. Thus, the famous emphasis in the Framework is on holdout problems, especially in the eminent domain example. See Calabresi and Melamed, *supra* note 9, at 1106-07. For more on

Entitlements theory imagines the state as the only entity capable of making adjustments to overcome transaction costs, but once the entitlements are set, post-grant transactions fall into well-understood and unvarying patterns. Entitlements, like the forces of nature, take their natural course once the state lets them loose. The holders of entitlements must simply stand idly by, hoping that the state got it right when it set the great wheels in motion. Though motivated by an interest in transactions, the entitlements literature reflects a curiously *static* view of exchange relationships and institutions.

The new institutional literature, by comparison, reflects a fascination with the *dynamic* responses of economic agents and with the post-grant environment. It documents the ingenious arrangements for cooperation and exchange that economic actors construct against the backdrop of formal legal rules, including initial entitlements. Scholars utilizing this approach do not assume that the state must "get it right" in the initial assignment of rights; they look instead at patterns of re-assignment and contracting, especially as these occur within the framework of organizations designed explicitly for this purpose.

In addition, the new institutional economics takes into account a far broader range of transaction costs. Valuation, monitoring, and enforcement are dealt with explicitly, as are the related issues stemming from repeated transactions. Strategic issues, such as the holdout problem, are addressed, but tend to receive less attention, because they are less important in the repeat-play settings that give rise to institutions in the first place.⁷⁶

Finally, studies of institutions add a new and highly illuminating chapter to the perennial debate over the role of government in economic affairs. Detailed descriptions of actual institutions expose the subtle interplay of government authority and private action, and therefore frustrate simplistic attempts to demonstrate the "superiority" of one or the other.⁷⁷ Those faithful to the libertarian creed will be disappointed by descriptions of institutions that failed to take root in the ab-

holdouts, bargaining breakdown, and other transaction costs in the intellectual property context, see Merges, *supra* note 62.

76. That is, since institutions structure an ongoing relationship, they discourage holdout behavior. If *A* holds out in period 1, *B* will be likely to do so in period 2. Knowing this, the institution is structured, and its rules administered, to reduce the incidence of holdout behavior. This is in everyone's interest over the long haul. See Ostrom, *supra* note 53, at 182. See generally Eggertsson, *supra* note 16.

77. In particular, the literature on the origin and incremental growth of institutions undermines the more pessimistic implications of two bodies of recent scholarship: the "problem" of collective action, see, e.g., Mancur Olson, *THE LOGIC OF COLLECTIVE ACTION* (1971), and public choice theory, see, e.g., James M. Buchanan & Gordon Tullock, *THE CALCULUS OF CONSENT* (1962); Dennis C. Mueller, *PUBLIC CHOICE* (1979). The former holds that groups can rarely organize even if it is in the interest of prospective members to do so; the latter emphasizes the role of organized interest groups in systematically influencing government.

sence of stable contract-enforcement mechanisms or property rights. By contrast, antitrust investigations of patent pools and the private fashion design regime that flourished in the 1930s discredit calls for redoubled government supervision of the economy, at least insofar as they neglected to inquire into the possible transactional efficiencies produced by these arrangements.

The recent work of Robert Cooter on the proper relationship between private "law merchant" systems and the central state—which in some ways builds on themes first identified by institutionally-oriented economists such as Douglass North—is especially helpful.⁷⁸ Cooter, writing from a law and economics perspective, anticipates many of the conclusions of this Article when he calls for a more sophisticated understanding of the role of the state in facilitating and regulating decentralized, private institutions.⁷⁹

1. *The Evolution of Institutions for Collective Action*

Most of the salient features of the new institutional economics are manifest in Elinor Ostrom's path-breaking book, *Governing the Commons*.⁸⁰ Because it is both representative of this broader literature and highly instructional for analyzing intellectual property institutions, I will consider it at some length.

Ostrom presents a wide array of field research on private institutions that administer common property resources. She focuses primarily on "open-access" water resources such as groundwater basins, in-shore fisheries, and mountain pastures. Her extensive fieldwork reveals how voluntary allocation organizations are formed and operate in settings as diverse as rural Spain and Southern California.

Ostrom's work describes how voluntary institutions arise to allocate scarce resources without formal property rights or significant government oversight. Her cases reveal a rich pattern of responses to the "tragedy of the commons,"⁸¹ in which the absence of property rights and formal coordination mechanisms typically lead to overuse of the resource.

Ostrom describes who organized each institution and why. She details the complex rules governing who can join, how informal "rights" to resources are determined, how compliance is monitored, how rules are enforced, what sanctions are imposed, and whether (and to

78. See Robert D. Cooter, *Structural Adjudication and the New Law Merchant: A Model of Decentralized Law*, 14 INT'L REV. L. & ECON. 215 (1994); DOUGLASS C. NORTH, INSTITUTIONS, INSTITUTIONAL CHANGE AND ECONOMIC PERFORMANCE (1990).

79. *Id.* at 226.

80. OSTROM, *supra* note 53.

81. See Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968).

what extent) “external” governmental authorities oversee the institution.

Because it mirrors IPR institutions in some ways, the example of water basin authorities in Southern California is reviewed here in depth. These institutions emerged out of classic tragedy of the commons conditions: an open access resource combined with minimal (almost non-existent) property rights.⁸² Municipalities that shared water basins, which are large, permanent, subsurface water sources, initially overused the water. As predicted in tragedy of the commons models, they each raced to appropriate resources, resulting in inefficient use and rapid depletion. These municipalities engaged in repeated litigation over how much water each city could appropriate under rather hazy state law principles of capture. By law, each municipality had the right to use as much water as it could make “beneficial use” of, but total usage could not exceed the “sustainable yield” of the water basin.

In the shadow of this somewhat vague set of entitlements and in response to continuous litigation, municipalities formed voluntary water basin districts and associations. The first task of these institutions was to implement proportional cutbacks to comply with the “sustainable yield” requirement. Then, these institutions assumed their ongoing operational role. They provide for fixed water allocations (though some Coasean trading does appear to take place); neutral monitors, or “watermasters”;⁸³ and even systematic investments in groundwater enhancement technologies.⁸⁴ Although the influence of government can be seen in the formation and operation of these institutions, Ostrom stresses the essentially private nature of the collective action behind these institutions.⁸⁵

Ostrom’s work provides a new lens through which to examine IPR institutions established in the context of formal property rights. In the next Section, we review the new institutional literature that discusses the emergence of institutions where there are minimal property rights.

2. *The Emergence of Stable Institutions With Minimal Property Rights—Of Medieval Trade Guilds*

Scholars have found that institutions to facilitate transactions can emerge even in the absence of strong property rights. The informal

82. See also GLENN G. STEVENSON, *COMMON PROPERTY ECONOMICS: A GENERAL THEORY AND LAND USE APPLICATIONS* (1991) (building on the author’s empirical studies of Swiss grazing rights in common pastures).

83. The watermasters’ salaries are paid for mostly by member cities but partly by the State of California. Ostrom, *supra* note 53, at 126.

84. *Id.* at 127. These investments are paid for by proportional contributions of the member cities. *Id.* at 138.

85. *Id.* at 110.

institutions of Medieval traders have attracted much attention in this regard.⁸⁶ Avner Greif, Paul Milgrom and Barry Weingast describe one such institution, the Maghribi trading network, a tight-knit group of Jewish overseas agents who represented Mediterranean merchants in eleventh century trade.⁸⁷ These traders were more than an ethnic group with a common occupation; they were an economic institution for facilitating trade:

To reap the benefit of employing overseas agents, an institution was required to enable the agents to commit to act on behalf of the merchants. . . . [T]he "Maghribi traders" managed their agency relations by forming a coalition whose members ostracized and retaliated against agents who violated their commercial code. Interrelated contractual arrangements motivated merchants to participate in the collective retaliation against agents who had cheated, and close community ties assured that each member had the necessary information to participate in sanctions when necessary.⁸⁸

These traders made it possible for merchants to sell their goods in distant markets, despite the absence of formal commercial law protections against theft.⁸⁹ Merchants could rely on the Maghribi traders who employed *group* boycotts to enforce their rules. If one trader violated the trust of a merchant, all traders would shun him. This feature Greif calls "collective punishment."⁹⁰

This literature suggests that we might find CRO institutions that have emerged even in the absence of strong property rights. I examine the fashion designers' guilds of the 1930s and the Writer's Guild's Script Registry system in Part III in light of these theories.

3. *Incentives to Join Institutions: The Effects of Lower Enforcement Costs*

The decision to found or join collective IPR institutions turns on exchange and enforcement costs. If the institution lowers the cost of

86. See, e.g., Avner Greif, *Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition*, 83 AM. ECON. REV. 525 (1993) [hereinafter Greif, *Enforceability and Institutions*]; Avner Greif, *Reputation and Coalitions in Medieval Trade: Evidence on the Maghribi Traders*, 49 J. ECON. HIST. 857 (1989); Paul R. Milgrom et al., *The Role of Institutions in the Revival of Trade: The Medieval Law Merchant, Private Judges, and the Champagne Fairs*, 2 ECON. & POL. 1 (1990).

87. Avner Greif et al., *Coordination, Commitment, and Enforcement: The Case of the Merchant Guild*, 102 J. POL. ECON. 745 (1994).

88. *Id.* at 746-47 (footnote omitted).

89. See Greif, *Enforceability and Institutions*, *supra* note 86, at 528-31. Without solid legal systems undergirding contracts, such trade is difficult. Agents must be trustworthy, or else merchants will not ship them goods or give them money. The Maghribi trading group was an institution designed to foster and perpetuate such trustworthiness in the absence of formal enforcement mechanisms. *Id.*

90. *Id.* at 531.

exchange and enforcement, it makes sense to join. If not, it is better for each right holder to rely on private enforcement.

Although economic theorizing about the choice of enforcement methods is still in its infancy, one model deserves mention here. Thrainn Eggertson, summarizing a field study and associated model by B.C. Field,⁹¹ observes that institutions can substitute for private property rights.⁹² Where a collective institution lowers the cost of excluding trespassers (or infringers), it can be used to augment private enforcement of property rights. Field's model relates to decisions regarding the optimal parcel size for real property holdings by members of a community. He is concerned with showing that, where community members must police against damage from trespassers, efficiency is not necessarily served by small parcel sizes. This is so even though, for well-understood reasons, small parcel size is associated with significant advantages.⁹³ It makes sense for individuals to cede some property rights to the community by sharing larger parcels rather than owning smaller ones outright where cheaper enforcement against trespassers increases the overall efficiency.

Field's model posits a Group in possession of a large tract of land held in common. The Group must decide how to divide the tract into parcels. Specifically, it must determine the optimal size of each parcel. Simultaneously, the Group must decide how much to spend to exclude others from each parcel. Large parcel sizes are associated with high internal governance costs. Large parcels must be shared among many users. The costs come from deciding how much each person may use the land, monitoring that use, and sanctioning overuse. Smaller parcels lower these costs. In the extreme, with one parcel per person, such costs go to zero. Yet, smaller parcels engender higher exclusion costs. More parcels means more borders. The more borders, the harder it is to patrol all the borders against incursions from outside trespassers.

91. Barry C. Field, *The Evolution of Property Rights*, 42 KYKLOS 319 (1989). The version of the Field paper cited by Eggertson is an earlier, unpublished draft.

92. EGGERTSON, *supra* note 16, at 257. *But see* Ellickson, *supra* note 65, at 1329 (describing "the shift from group to individual ownership of land" as substituting "the relatively cheap systems of self-control and boundary monitoring for the relatively costly system of pervasive intragroup monitoring"). Ellickson's assumption that group monitoring is more expensive may not apply to the IPR context.

93. *Cf.* Ellickson, *supra* note 65, at 1327-28. Field and Ellickson reach different conclusions because they emphasize different costs and advantages of small versus large parcels. Field is concerned primarily with monitoring trespass, whereas Ellickson focuses on the cost of monitoring how much each common owner puts into the land in labor and takes out in food and other resources. One might reconcile the two by pointing out that each is relevant, depending on the relative magnitudes of enforcement and monitoring costs. Ellickson, for example, makes very good arguments for small parcel size in real estate holdings. *Id.* At the same time, the very high enforcement costs modelled by Field are a prominent feature of many IPRs; hence Field's model helps us to understand certain emerging trends in the multimedia industry, for instance.

The Group must balance the number of parcels against the exclusion expenditure for each. Field models this via two functions; one determines the optimal number of parcels for each level of exclusion expenditure, and the other gives the optimal level of exclusion expenditure for each number of parcels. One aim of Field's model is to show the effect of exogenous changes on two types of costs: the costs of internal governance, and the costs of enforcement against trespassers. It is obvious from the structure of the model that lowering governance costs makes larger parcels (i.e., more common areas) more attractive, while lowering exclusion costs favors smaller parcels (i.e., more "privatization").⁹⁴ A similar argument can be found in an article on property in land by Robert Ellickson.⁹⁵

In a recent volume on the formation of institutions, economist Andreas Papandreou provides a provocative reinterpretation of Field's model.⁹⁶ According to Papandreou, Field's distinction between "property rights" and governance is a false one. Papandreou argues that property rights ought to be viewed as simply another form of governance. He thus sees a continuum of governance structures, ranging from property rights to formal institutions. Although the notion of property rights as a decentralized governance structure would appear to stretch the concept somewhat, Papandreou captures an important element. Property rights do encourage the formation of institutions to coordinate and administer the individual property rights, at least where those rights are involved in a high volume of transactions among individual right holders.⁹⁷ Hence the institutions studied in this Article show

94. Field also provides a counter-argument to the well-known Demsetzian theory of optimal property rights. See Demsetz, *supra* note 73 (property rights will be defined and enforced only up to the point where associated costs are worthwhile in light of the value of the underlying assets). Field notes that as the value of the land increases—e.g., because of an exogenously determined rise in agricultural prices—the incentives to clarify property rights increase, as Demsetz predicts. At the same time, however, he notes that the returns to trespassing also increase. Thus a series of considerations that might not seem important at first—including the identity of one's neighbors, the cost of policing the boundaries, etc.—must be evaluated before it can be concluded that partitioning the parcel further is the appropriate approach. In other words, increasing expenditures on internal governance—i.e., more costly monitoring of activities on the common property—might be interchangeable, or even superior, to increasing the number of privately held parcels.

Cf. DANIEL W. BROMLEY, *ECONOMIC INTERESTS AND INSTITUTIONS* 14-18 (1989) (arguing that the structure of property rights is determined by the level of technology, together with the "economic surplus," i.e., economic value of assets underlying the rights). For a discussion of enforcement and exchange technologies in the context of multimedia, see *infra* Part IV.

95. See Ellickson, *supra* note 65. See also CARL J. DAHLMAN, *THE OPEN FIELD SYSTEM AND BEYOND: A PROPERTY RIGHTS ANALYSIS OF AN ECONOMIC INSTITUTION* (1980); Carl J. Dahlman, *The Problem of Externality*, 22 J.L. & ECON. 141 (1979).

96. ANDREAS A. PAPANDREOU, *EXTERNALITY AND INSTITUTIONS* (1994).

97. I have also tried to extrapolate a bit, arguing for instance that granting formal property rights can increase the number of potential organizational forms a rightholding firm might assume. See Robert P. Merges, *Intellectual Property and the Costs of Commercial Exchange: A Review Essay*, 93 MICH. L. REV. 1570 (1995) (reviewing PETER A. ALCES & HAROLD F. SEE, *THE COMMERCIAL*

that property rights and governance are closely linked in high-volume transactional settings.

Such models help explain some features of IPR institutions. Firms in an industry are faced with the decision whether to rely on individual rights to exclude infringers or pool rights in a collective organization.⁹⁸ They trade off enforcement costs associated with individual rights against the costs of founding and participating in the institution. Although joining such an institution involves ceding some individual control, it may lower costs overall. If so, firms will decide to join. The CROs studied in this Article are the product of just such decisions. As we will see in Part IV, this tradeoff between strong property rights and high enforcement costs is a prominent feature of the current environment for IPRs in the emerging multimedia field.

4. Conclusion

The literature on institutions helps identify the underlying economic logic behind the formation of private IPR systems, both in the presence and absence of strong property rights. It also recommends that antitrust actions against such organizations should not be taken lightly. For example, the group boycott, which ordinarily might appear an obvious antitrust concern, may serve an important function in facilitating transactions.

II

EMERGENCE OF EXCHANGE INSTITUTIONS IN THE PRESENCE OF PROPERTY RIGHTS

Collective rights organizations devise general rules that replicate contracting terms between two parties. Usually, these CROs establish at least a few distinct classes of rights. After setting up the basic categories of rights, CROs then assign each right to one of the classes.

This is hardly the same as the detailed negotiations that accompany an everyday licensing deal. But everyday licensing involves only two

LAW OF INTELLECTUAL PROPERTY (1994)). I have applied this idea in a study of the software industry in Japan, where policy makers are attempting to encourage the formation of independent, entrepreneurial software firms by strengthening property rights in software. Such firms are relatively rare now; most software is custom-made for individual clients by subsidiaries of large companies, and is protected against copying either by contractual terms or by selling to affiliated firms (e.g., within the same *keiretsu*). See Robert P. Merges, *A Comparative Look at Property Rights and the Software Industry*, in *THE INTERNATIONAL COMPUTER SOFTWARE INDUSTRY: A COMPARATIVE STUDY OF INDUSTRY EVOLUTION AND STRUCTURE* 272 (David C. Mowery ed., 1996).

98. Note that in the Field model, an omniscient social planner is deciding whether to assign individual property rights, and if so, how large to make them. Decisions of firms holding individual intellectual property rights are obviously different. They will look to maximize firm, as opposed to social, welfare. In addition, they are deciding whether to cede some aspects of the property rights they already have, as opposed to deciding on an initial assignment of rights.

parties: a right holder and a single licensee. Each licensing contract, though similar to others in some respects, is unique. A CRO cannot draft individual contracts, but it can assign works to categories based on the members' knowledge and experience. CRO's produce an intermediate level of contract detail, reflecting collective industry expertise and the need for efficiency in carrying out a high volume of transactions. They might be called organizations for "bulk contracting, by committee."

One of the central functions of CROs is to set a price for the rights in the portfolio: both a price for the entire portfolio, sometimes referred to as a blanket royalty rate, and prices for the individual rights within the portfolio. In both cases, the price(s) are the same for all takers, or at least for all similarly-situated licensees. By setting collectively-determined prices, CROs create something closely akin to a compulsory license. Essentially all market participants are welcome to use the right(s), so long as they pay the pre-established price.

There is one crucial difference, however, between private collectives and statutory compulsory licenses: in these organizations, the members, and not Congress or a court, set the price. Price setting by CROs almost always involves extensive negotiations; sometimes, ongoing adjustments are carried out via a permanent administrative structure. CROs present a simple, coherent menu of prices and other terms to licensees—and they do so after extensive internal consultation.

This Part describes some of the most significant CROs that have developed thus far in the intellectual property area. These institutions emerged from a background of strong property rights that created potential roadblocks to the health and development of important industries. Discussion of those institutions that emerged in the absence of property rights is deferred until Part III.

A. Performing Rights Societies

Public performances—on radio and television, and in live entertainment outlets, to name the largest classes—flood our culture at an ever-increasing pace. Imagine the enormous cost if discrete bargains between each "buyer" of a performance right and each copyright owner were required. Yet, the public performance right is one component of copyright, which, like the other branches of intellectual property, protects rights with a strong property rule. Given the enormous number of bilateral bargains called for by the copyright entitlement, collective rights administration of some sort is the only sensible solution.⁹⁹

99. At the level of the input market, there is an alternative exchange mechanism: vertical integration. This mechanism is certainly not unknown in the music industry. For example, Chappell-

Performing rights societies have emerged to perform this collective rights administration.¹⁰⁰ ASCAP, the American Society of Composers, Authors, and Publishers, which was formed in 1914, is one of the largest performing rights societies.¹⁰¹ Like the other institutions of its kind, ASCAP acts as a central depository that allows members to control public performances of their works. ASCAP issues "blanket licenses" covering the relevant copyrights of all members of the Society to radio and television stations and other entertainment outlets. It then monitors the songs played and divides up the total receipts among all members on the basis of a complex *pro rata* formula.¹⁰² Monitoring and enforcement activities with respect to licensees and infringers are also an important part of ASCAP's function.¹⁰³ A rival organization, Broadcast Music Incorporated (BMI), which was founded in 1941 expressly to compete with ASCAP, operates similarly.¹⁰⁴

The origins of ASCAP fit a characteristic pattern for successful appropriation institutions: it started small and grew incrementally, adjusting its internal governance structure along the way.¹⁰⁵ ASCAP was formed when nine prominent participants in the New York music industry banded together to take concerted action against flagrant, uncompensated public performances of musical works.¹⁰⁶ It appears that no single composer had enough capital single-handedly to fight the

Warner, a large music publishing company, is said to hold over 700,000 copyrights to musical compositions. DAVID SINACORE-GUINN, *COLLECTIVE ADMINISTRATION OF COPYRIGHTS AND NEIGHBORING RIGHTS: INTERNATIONAL PRACTICES, PROCEDURES, AND ORGANIZATION* 198 (1993). Elsewhere I have described the advantages bestowed by individual property rights given to authors and performers, most notably the creative freedom that flows from the ability to sell a property right in a creative work, as opposed to one's labor in producing it. This I have termed the "(intellectual) propertization of labor." See Merges, *supra* note 97, at 1575-77.

100. There are 72 such societies worldwide, with operations in 182 countries. SINACORE-GUINN, *supra* note 99, at 5.

101. See Jane D. Comerford, Note, *CBS v. ASCAP: Blanket Licensing and the Unresolved Conflict Between Copyright and Antitrust Law*, 13 CONN. L. REV. 465, 470-76 (1981). Note that an international study of IPR collectives by a group of economists found striking similarities in their basic organization and administration. See STANLEY M. BESEN & SHEILA NATARAJ KIRBY, *COMPENSATING CREATORS OF INTELLECTUAL PROPERTY: COLLECTIVES THAT COLLECT* (RAND Study) (1989); Stanley M. Besen et al., *An Economic Analysis of Copyright Collectives*, 78 VA. L. REV. 383, 385-90 (1992).

102. Owing to various anticompetitive practices litigated in a series of antitrust cases, ASCAP operates under a consent decree. See *United States v. ASCAP*, 1960 Trade Cas. (CCH) ¶ 69,612 (S.D.N.Y. Jan. 7, 1960).

103. James Barron, *Facing the Music: There's a Bill When Songs Fill the Air*, N.Y. TIMES, Aug. 7, 1993, at 23.

104. On the formation of BMI, see Lee C. White, *Musical Copyrights v. The Antitrust Laws*, 30 NEB. L. REV. 50, 54-55 (1951) (describing formation of BMI by radio group, the National Association of Broadcasters, in 1941 in response to steep price hike by ASCAP); see also Barron, *supra* note 103 (describing sleuthing work of Carol Alessi, BMI "copyright cop").

105. For a brief history of the founding and early years of ASCAP, see Ruth Charles, *ASCAP—A Half Century of Progress*, 11 BULL. COPYRIGHT Soc'Y U.S.A. 133 (1964).

106. *Id.* at 136. See also White, *supra* note 104, at 51-52.

restaurant and nightclub owners, who threatened a concerted boycott of any composer who challenged their practices.¹⁰⁷ To meet the threat, ASCAP's founders chose as president George Maxwell, a music publishing executive, and as vice president Victor Herbert, a prominent composer of popular and serious music who was the music director of the Philadelphia Orchestra.¹⁰⁸

In the beginning, ASCAP was little more than a cost-spreading club for copyright litigation. In this respect, Herbert proved to be a good plaintiff as well as vice president, lending his name to the foundational case written by Oliver Wendell Holmes that established that restaurants which performed music must compensate composers even if patrons are not charged separately for the musical entertainment.¹⁰⁹ ASCAP's second president, Gene Buck, vigorously enforced the public performance rights of ASCAP members; he initiated cases in the far corners of the country,¹¹⁰ going after such disparate users as dance hall operators,¹¹¹ hotels,¹¹² movie theaters,¹¹³ and eventually radio broadcasters.¹¹⁴

After some early procedural setbacks related to membership structure¹¹⁵ and policing tactics,¹¹⁶ ASCAP achieved an impressive string of

107. Presumably, this was a credible threat either because it meant that users who were currently paying royalties would stop, or because there was some value to composers in having their music played even when they were uncompensated—i.e., "advertising" value.

108. Charles, *supra* note 105, at 136.

109. Herbert v. Shanley, 242 U.S. 591 (1917).

110. See, e.g., Buck v. Kloeppel, 10 F. Supp. 345 (S.D. Fla. 1935) (suit by Gene Buck, "as president of ASCAP," against Florida nightclub operators); Buck v. Milam, 32 F.2d 622 (D. Idaho 1929) (Idaho dance hall); Buck v. Lester, 24 F.2d 877 (E.D.S.C. 1928) (South Carolina movie theater); Buck v. Heretis, 24 F.2d 876 (E.D.S.C. 1928) (South Carolina restaurant).

111. Milam, 32 F.2d at 622.

112. Buck v. Jewell-La Salle Realty Co., 283 U.S. 191 (1931) (use of radio in hotel lobby).

113. Lester, 24 F.2d at 877.

114. See Jerome H. Remick & Co. v. General Electric Co., 16 F.2d 829 (S.D.N.Y. 1926) (successful suit brought by ASCAP member, who was represented by Nathan Burkan, ASCAP General Counsel, against defendant for unauthorized broadcasting of plaintiff's copyrighted composition).

115. ASCAP's standing to bring suit was an issue in several early cases. See, e.g., M. Witmark & Sons v. Pastime Amusement Co., 298 F. 470, 474-75 (E.D.S.C. 1924). ASCAP apparently overcame the standing problem by bringing actions in the name of individual members whose works were infringed, together with ASCAP itself. While one court was still unwilling to grant standing, see Buck v. Kloeppel, 10 F. Supp. 345 (S.D. Fla. 1935) (dismissing complaint by several ASCAP members due to misjoinder of parties, notwithstanding joinder of ASCAP as a party), this decision seems to have been the exception. See Buck v. Elm Lodge, Inc., 83 F.2d 201, 202 (2d Cir. 1936) (explicitly disagreeing with *Buck v. Kloeppel*). *Elm Lodge* was consistently followed. See, e.g., Buck v. Virgo, 22 F. Supp. 156, 156 (W.D.N.Y. 1938). An additional problem, occasioned by the early practice whereby ASCAP's members granted only a *nonexclusive* license (which allowed several defendants to argue that they had received an independent, often oral, license), was overcome in 1921 with changes to ASCAP's Articles of Association. See Herman Finkelstein, *The Composer and the Public Interest—Regulation of Performing Right Societies*, 19 LAW & CONTEMP. PROBS. 275, 287-88 (1954) (describing changes to ASCAP organization in 1921 to solve this problem, including requirement that members grant exclusive licenses only); *Pastime Amusement*, 298 F. at 483-84 (reproducing, in Exhibit A, ASCAP membership agreement of Feb. 18, 1922, paragraphs 4 and 6, assigning public

legal victories.¹¹⁷ In each case, the court found for the copyright holder, over the objections of defendants who often complained about the practical difficulties of policing multiple performances.¹¹⁸ Significantly,

performance right, and vesting in ASCAP “exclusive right of public performance”). In addition, ASCAP’s publisher members gave formal notice with each sale of sheet music that no public performance license was to be implied in the transaction. *See, e.g., Pastime Amusement*, 298 F. at 472 (reproducing notice that plaintiff agreed to place on all sales of sheet music after Feb. 18, 1922):

“Please, therefore, take notice that no agent, employee, or representative of any of the undersigned is vested with authority or power to grant, under any circumstances, to any firm or individual, any right to publicly perform for profit, the musical compositions of which we are or may be the copyright proprietors.

“Please take further notice that the possession of a printed copy or orchestration of any of such compositions does not imply or convey any right to public performance thereof for profit, irrespective of whether such printed copy is received as a gift, obtained by purchase, or otherwise.

116. Early on, ASCAP appeared to use quasi-independent lawyer-sleuths to police members’ rights. In exchange for discovering a violation, the lawyer received the right to represent ASCAP in the case. This practice was criticized as verging on “barratry,” or overzealous solicitation of legal work, in at least one case. *See* *Buck v. Elm Lodge, Inc.*, 29 U.S.P.Q. 444 (N.D.N.Y. 1936); Note, *Musical Monopolies*, *supra* note 55, at 458-59 n.5 (1940). It gave way rapidly to the detection of infringers by ASCAP members and employees. *See, e.g., M. Witmark & Sons v. Calloway*, 22 F.2d 412, 413 (E.D. Tenn. 1927) (“On June 9, 1926, Frank J. McGhee, a musician and also an attorney representing [ASCAP], after paying the usual admission fee, visited this theater as a patron, remaining there from about 7 until 9 o’clock in the evening, and heard performed on the player piano, by means of the music rolls, several pieces of music, and among others the piece in question . . .”); Barron, *supra* note 103, at 23 (describing sleuthing work of Carol Alessi, ASCAP “copyright cop”).

117. *See* cases cited *supra* notes 109-114.

118. *See* 174th St. & St. Nicholas Ave. Amusement Co. v. Maxwell, 169 N.Y.S. 895, 896-97 (Sup. Ct. 1918) (emphasis added):

Plaintiff alleges an understanding between authors, publishers, and composers prior to the formation of the defendant association that the purchase of copies of the printed music entitled them to be rendered in the place of business of the plaintiff or others similarly situated *without further cost or expense*. Plaintiff alleges that there are more than 50,000 places in the United States used for public accommodation, where popular music is rendered incidental to the business conducted, and that the amount sought to be collected by the defendant association exceeds the sum of \$2,000,000 annually. It also alleges that the intent of actions instituted in the United States courts is to compel thousands of moving picture theaters in the United States to pay the license fee to the defendant association . . .

The court rejected this very early challenge to ASCAP, noting (1) the availability of a blanket license: “[t]he Association, by consent of its members, grants to any moving picture operator, or to any proprietor of a public entertainment, permission to play all the musical compositions of all of its members for a fee graduated according to the seating capacity of the place of entertainment”, *id.* at 896; and (2) the strong property rule built into copyright law:

[t]he only restraint on plaintiff is the possible right of the authors or owners of such music to prevent its use. . . . The fact that the music of the authors who are members of the association is popular and in demand presents just so much more reason why it should be protected, and its unauthorized use at public entertainment given for profit prevented. Practically the exhibitors of moving pictures seek to obtain by injunction the right to publicly perform copyrighted musical compositions for profit, without a consent of the holder of copyright, and without compensation to him.

Id. at 897. Today, movie theater public performance rights are licensed at the same time as the “synchronization” right permitting a song to be incorporated in a motion picture. *See* AL KOHN & BOB KOHN, *KOHN ON MUSIC LICENSING* 739-40 (2d ed. 1996).

See also Calloway, 22 F.2d at 414 (rejecting defense based on defendant’s inability to supervise which songs were played by employees: that “young Williams, the operator of the player piano,

in none of the cases did a court excuse infringement due to the expense of locating and bargaining with copyright holders;¹¹⁹ and in every case, an injunction was granted. A 1918 case even granted implicit recognition of ASCAP's role in administering a contractual liability rule:

When a place of amusement publicly renders any composition of any member of the association [i.e., ASCAP] *without permission obtained through payment of the fee to the association or by consent of the author*, a notification of infringement of copyright is sent to the proprietor of such place.¹²⁰

Thus, the early history of ASCAP is a history of the regular, almost unthinking enforcement of strong property rule entitlements and the institution built upon them.¹²¹ The only authoritative gesture to the contrary appears in a Supreme Court opinion upholding an injunction

borrowed this music without the direction, knowledge, or consent of the owner or manager of the theater [does not] affect the question. The rule of the common law applies, to wit, that the master is civilly liable in damages for the wrongful act of his servant in the transaction of the business which he was employed to do, although the particular act may have been done without express authority from the master . . ."; *Buck v. Lester*, 24 F.2d 877 (E.D.S.C. 1928) (holding that the defendants' claim that they were unaware that the piece was copyrighted was not a sufficient defense under the Copyright Act).

119. The only partial exception is *Buck v. Debaum*, 40 F.2d 734 (S.D. Cal. 1929). In *Debaum* the court began by noting that:

There had been no direct contractual relations between plaintiffs as owners or authors of the copyrighted musical composition and defendant café owner whereby he had been authorized to play, use, or perform the copyrighted musical composition.

Id. at 734. On this basis, the court held that keeping a radio set in a café did not infringe the public performance rights of copyright holders whose compositions were played over the air:

[I]f during the reception of such programs, one using the radio in his business is required to turn the dial of his receiving set so as to render inaudible any copyrighted composition, the utmost difficulty and confusion will result, and a condition ensue that to my mind is unreasonable, and one that was never within the intent of Congress in passing the Copyright Act or within the reasonable purview of the terms thereof.

Id. at 736.

This rationale, together with the broad holding of *Debaum*, was never followed; it was in fact rejected by the Supreme Court. See *Buck v. Jewell-LaSalle Realty Co.*, 283 U.S. 191 (1931) (holding that playing radio in hotel lobby violated copyright holder's public performance right). The *Jewell-LaSalle* Court interpreted *Debaum* as holding at most that the copyright holder's authorization to broadcast may carry with it an implied license. As the Court put it, "[A] license for . . . commercial reception and distribution by the hotel company might possibly have been implied." *Id.* at 199 n.5. In so holding, the Court clearly rejected the notion that the difficulty of contracting for the performance right creates a broad exemption from infringement liability. Current law codifies the holdings of *Jewell-LaSalle* and its progeny. See 17 U.S.C. § 110(5) (1996) (limiting exemption from public performance right to use of "a single receiving apparatus of a kind commonly used in private homes").

120. *174th St.*, 169 N.Y.S. at 896 (emphasis added).

121. Cf. *M. Witmark & Sons v. Calloway*, 22 F.2d 412, 414 (E.D. Tenn. 1927) ("While there does not appear to be any immediate danger of further infringement, yet I am of opinion that the injunction should issue as a recognition of plaintiff's technical right under section 25 of the copyright statute (17 USCA § 25)."); *Jerome H. Remick & Co. v. General Electric Co.*, 16 F.2d 829, 829 (S.D.N.Y. 1926) (stating in a case involving a radio transmission defendant and a plaintiff represented by Nathan Burkan, ASCAP counsel, that "there must be a decree for the plaintiff for the usual injunction").

against a radio broadcaster, but it quite specifically refers consideration of such an entitlement to Congress.¹²² Apparently, the emerging perception that the property rule entitlement would be enforced convinced many composers and publishers to join ASCAP;¹²³ surely the small damage awards¹²⁴ provided only a small prize for new members to divide.

Despite the swelling ranks, ASCAP's finances crept along a modest expansion path. The group divided what little net royalties there were equally among publishers and composers. Nor were ASCAP employees benefitting personally; the General Counsel, Nathan Burkan, reportedly went entirely without pay for ASCAP's first seven years, a period of almost frantic litigation, judging by how often Burkan's name appears in reported cases involving ASCAP and its members.¹²⁵

ASCAP's big break came with the advent of radio technology in the early 1920s.¹²⁶ At first, ASCAP allowed radio stations free use of members' compositions.¹²⁷ By 1925, however, the "free sample" era ended and a series of lawsuits began. These were directed at early commercial users of radio—mostly large retail stores and hotels—and helped ASCAP establish the right for compensation to *all* music played over the radio.¹²⁸ By 1940, the radio broadcasting industry had gross revenues of close to \$200,000,000.¹²⁹ Of this amount, ASCAP collected a reported \$4,000,000, which represented two-thirds of ASCAP's gross revenue.¹³⁰

122. See *Jewell-LaSalle*, 283 U.S. at 199 (footnotes omitted) (emphasis added):

It may be that proper control over broadcasting programs would automatically secure to the copyright owner sufficient protection from unauthorized public performances by use of a radio receiving set, and that *this might justify legislation denying relief* against those who in using the receiving set innocently invade the copyright, but *the existing statute makes no such exception*.

123. Finkelstein, *supra* note 115, at 287 (citing then-General Counsel for ASCAP that by the end of its first year of existence, in 1915, ASCAP had grown to include 170 composers and 22 publishers). It had 1,000 composers in 1941. See *infra* notes 132-134 and accompanying text.

124. Cohn, *supra* note 55, at 415 n.53 (indicating that damages collected by ASCAP during its first 27 years were only \$8,800).

125. Charles, *supra* note 105, at 137. See Herman Finkelstein, *ASCAP as an Example of the Clearing House System in Operation*, 14 BULL. COPYRIGHT SOC'Y USA 2, 3 (1966) (article by then-General Counsel of ASCAP).

126. It was not until 1920 that the commercial possibilities of radio were widely realized. See Louis G. Caldwell, *The Copyright Problems of Broadcasters*, 2 J. RADIO L. 287, 287 (1932). As late as 1931 some moving picture houses carried radio broadcasts from their stages, as a special novelty feature. VARIETY, Jan. 24, 1931, at 28.

127. White, *supra* note 104, at 53.

128. See Charles, *supra* note 105, at 137-38 (citing, for example, *Jerome H. Remick & Co. v. Am. Auto. Accessories Co.*, 5 F.2d 411 (6th Cir. 1925)).

129. See Cohn, *supra* note 55, at 412 & n.30 (citing Allen, *The Battle of Tin Pan Alley*, 181 HARPERS 514 (1940)).

130. *Id.* at 413 & nn.32-33 (citing Allen, *supra* note 129, at 515, 521).

ASCAP's rise paralleled the growth of radio, and later television.¹³¹ From its original nine members, the membership grew to 1,000 composers in 1941,¹³² 3,000 in 1958,¹³³ 17,800 composers and 4,800 publishers in 1977,¹³⁴ and over 31,000 composers and approximately 24,000 publishers today. The current membership has now licensed performance rights to over two and a half million compositions.¹³⁵

Despite the meteoric rise of ASCAP, its original organizational design has remained remarkably stable. The first two executives in the organization were drawn from the two major parts of the musical composition industry—composers and publishers.¹³⁶ As the institution expanded with the growth of radio, this basic governance structure was maintained.¹³⁷ After a very early adjustment in royalty arrangement,¹³⁸ the current fifty-fifty split between publishers and composers was agreed upon; it has not changed since. Since 1921, the board has numbered twenty-four members: twelve composers and twelve representatives from the publishing industry.¹³⁹ Each group is at least roughly represented by this arrangement, making for a stable institution.

131. Although movie houses joined the ASCAP licensee bandwagon in 1923, *see* Goodman, *supra* note 55, at 172, their participation effectively ended with a court's decision that ASCAP's movie theater licensing practices violated the antitrust laws. *Alden-Rochelle, Inc. v. ASCAP*, 80 F. Supp. 888, 893-895 (S.D.N.Y. 1948). This decision was later "codified" in the modified ASCAP consent decree. *See* U.S. v. ASCAP, 1950-1 Trade Cas. (CCH) ¶ 62,595 (S.D.N.Y. 1950) ("Defendant ASCAP is hereby enjoined and restrained from: . . . (F) Instituting or threatening to institute, or maintaining or continuing any suit or proceeding against (1) any motion picture theatre exhibitor for copyright infringement relating to motion picture performance rights . . ."). *See generally* Simon H. Rifkind, *Music Copyrights and Antitrust: A Turbulent Courtship*, 4 CARDOZO ARTS & ENT. L.J. 1, 7-17 (1985).

132. *Music Licensing Practices of Performing Rights Societies: Hearings Before the Subcomm. on Intellectual Property and Judicial Administration of the Senate Comm.on Judiciary*, 103d Cong., 2d Sess. 78 (1994) (statement of Marvin L. Berenson, Vice President and General Counsel, BMI) [hereinafter Berenson Statement].

133. *See* *Schwartz v. Broadcast Music, Inc.*, 80 F. Supp. 322, 326 (S.D.N.Y. 1959) (stating that individual plaintiffs sought to represent all 3,000 members of ASCAP).

134. SIDNEY SHEMEL & M. WILLIAM KRASILOVSKY, *THIS BUSINESS OF MUSIC* 163 (Paul Ackerman ed., rev. ed. 1977).

135. *Music Licensing Practices of Performing Rights Societies: Hearings Before the Subcomm. on Intellectual Property and Judicial Administration of the Senate Comm.on Judiciary*, 103d Cong., 2d Sess. (1994) (statement of Morton Gould, President Emeritus, ASCAP) [hereinafter Gould Statement].

136. *See* Charles, *supra* note 105, at 136.

137. Indeed, it might be argued that the role of music publisher has evolved in response to ASCAP. While sales of sheet music in 1927 totaled over \$17,000,000, in 1933 it dropped to \$2,000,000. Cohn, *supra* note 55, at 413 n.40. Today, according to an authoritative source, "[t]he publisher's role is to monitor and to promote use of the music through sheet-music sales ('paper' houses specialize in this) and, more important, through live performances and recordings." HAROLD L. VOGEL, *ENTERTAINMENT INDUSTRY ECONOMICS* 133 (2d ed. 1990). Publishers split royalties 50-50 with new composers, 25-75 with more established composers. *Id.* at 134.

138. Finkelstein, *supra* note 115, at 287-88 (describing change in 1921 from original split of 1/3 to composers, 1/3 to authors, and 1/3 to publishers, to the current 50-50 split).

139. *Id.* at 288.

ASCAP's chief competition, BMI, was founded in 1940 by radio stations trying to obtain some leverage against ASCAP. The creation of BMI followed a number of failed attempts to limit ASCAP's effectiveness through legislation.¹⁴⁰ BMI today represents approximately 150,000 U.S. songwriters and composers and approximately 50,000 U.S. publishers.¹⁴¹

As ASCAP has grown, it has devised ever more sophisticated techniques for determining (1) the appropriate royalty rate for each industry that makes use of performances,¹⁴² and (2) a fair division of royalty income among members. Currently, tremendous effort goes into structuring a royalty arrangement with each industry that reflects the value of music in that industry and includes realistic collection techniques.¹⁴³ Royalty division among members is done on the basis of a combination of self-reporting by licensees and sophisticated sampling techniques. ASCAP's reporting forms require very detailed data regarding the licensee's total revenues, adjustments thereto, and total blanket license royalty calculations. In addition, each radio and television licensee is required to provide a detailed "Program Log" listing all ASCAP-licensed compositions performed in a given period. Figure 1

140.

Such consistently unfavorable decisions [against radio infringers in favor of ASCAP], plus the enforced statutory minimum damages of \$250 for each and every infringement, made the radio industry aware that the days of undetected and unprosecuted infringements were over. It was then that they began a series of intensive efforts to deaden the effectiveness of the copyright law as interpreted by the courts, and at the same time to have ASCAP dissolved, thereby making the statutory protection of public performance for profit meaningless.

Cohn, *supra* note 55, at 415 (footnotes omitted).

These attempts, which are discussed in some detail below, fall into four general categories: (1) attempts to limit the public performance right, e.g., by providing for a liability rule plus statutory "implied license" permitting commercial establishments to receive and play radio signals so long as the broadcaster of the signals had properly licensed the performance right, *see* H.R. 10987, 69th Cong., 1st Sess. (1926) (providing for "a notice of the amount of royalty prescribed for any . . . public performance" to be affixed to a musical work, and that sale of such a work "shall carry with it an implied license * * * to broadcast it, or to use it for the manufacture of mechanical instruments, as the case may be, from and after payment of the prescribed royalty . . .") (emphasis added); (2) attempts to water down its enforcement, e.g., by eliminating the statutory minimum damages provision, *see* Cohn, *supra* note 56, at 415-16; (3) attempts to outlaw ASCAP by means of private federal antitrust actions, all of which failed, *see* Note, *Musical Monopolies*, *supra* note 55, at 459; and (4) lobbying of state legislatures for passage of state statutes outlawing or restricting ASCAP's operations, *see id.* at 459-60 (describing early success of such efforts); Richard W. Ergo, Comment, *ASCAP and the Antitrust Laws: The Story of a Reasonable Compromise*, 1959 DUKE L.J. 258 (describing lessening of pressure for these statutes in the wake of the 1950 consent decree); Rifkind, *supra* note 131, at 12-13 (describing ultimate repeal of most of these statutes).

141. *See* Berenson Statement, *supra* note 132, at 75.

142. These include: television and radio networks and stations, cable television program services and systems, restaurants, taverns, nightclubs, hotels, retail businesses, trade show promoters and organizers, conventions and consumer shows, shopping centers and shopping malls, background music services, colleges and universities, symphony orchestras, and others.

143. *See* Gould Statement, *supra* note 135, at 29-30.



Step 1

TOM'S DINER entered the survey of performances during the taping of more than 60,000 hours of local commercial radio programs in accordance with an independently and scientifically designed sampling of performances. The performance of *TOM'S DINER* which we are tracking here was included on a tape of WAPW-FM in Atlanta, Georgia, made on October 3, 1990 between 1:00PM and 7:00PM.

Step 2

The tape is sent back to ASCAP's New York office where a tape monitor plays back the tape, identifies the song, and notes, among other information, the type of performance, in this case a feature vocal, and the recording artist, in this instance Suzanne Vega (featuring DNA).

(If an obscure song is heard which the monitor cannot identify, he or she refers the work to a *solfeggist*, an expert trained in taking musical dictation. The *solfeggist* transcribes the notes heard on the tape and then searches our files for the matching composition.)

TV PERFORMANCES

LOCAL



Step 1

TOM'S DINER also entered the survey of performances during the scientific sampling of approximately 120,000 hours of local commercial TV performances. *TOM'S DINER* was picked up on a tape of station KNBC-TV in Los Angeles, California on October 10, 1990. The station was sampled between the hours of 3:00AM and 6:00AM.

Step 2

A tape monitor in ASCAP's New York office confirms that the television show "Record Guide Studio" was broadcast from 3:00AM to 3:30AM. The cue sheet for the program indicated a feature performance of *TOM'S DINER*.

NETWORK



Step 1

The song was performed on "Friday Night Videos" on the NBC television network on December 7, 1990 between 1:30AM and 7:30AM. Unlike local radio and local TV performances, most of which are sampled, every performance on network TV is counted. The three networks furnish information in the form of program logs and the Society also receives cue sheets from independent producers. ASCAP audio and video tapes the networks to check on the accuracy of the information submitted.

Step 2

When calculating performance credits, the "Hook up Weight" reflecting the number of network affiliates carrying the program transmitted by the network — replaces the "Station Weight" in the formula. In addition, a time-of-day weight is applied based on the time period of the broadcast, with "prime time" being given the highest weight. The resulting formula

Hook-up	Time of	Use	Feature	Strata
Wt.	X Day	Wt.	X Wt.	X Mult.
(.949)	(100%)	(100%)	(1.298)	(358)

equals approximately 441 performance credits for that one performance. As you can see, a single network TV performance generates many more credits than a single radio performance.

CABLE



Step 1

TOM'S DINER entered the survey of performances during the scientific sampling of cable TV performances. The performance we are tracking here occurred on MTV.

Step 2

MTV furnished ASCAP song titles and performance information in the form of program logs.

Figure 1. The examples listed here tracked only one performance of *TOM'S DINER* in each medium. The song, which was one of 1990's biggest hits, of course, received many performances.

Step 3

The song's performance is processed through the Society's computer system and performance credits are calculated on the basis of a four-part formula: **Station Weight** --based on the license fees paid to ASCAP by the station; **Use Weight** -- based on the kind of performance feature, background, theme, etc.; **Feature Multiplier** -- additional credits calculated for feature performances in areas not surveyed; and **Strata Multiplier** -- to bring total radio credits in line with radio's share of income from all surveyed media. For *Tom's Diner*, the

Station Wt.	Use Wt.	Feature Mult.	Strata Mult.
(1.000)	(100%)	(1.298)	(30)

equals approximately 39 performance credits for that one performance.

Step 4

This particular performance is combined in the Society's records with all the other performances of *TOM'S DINER* in the performance quarter and is reflected on the writer's performance record for the quarter, along with all the other songs written by the writer which have appeared in ASCAP's sample survey in the quarter;

Title	Share	Radio Credits
LEFT OF CENTER	75%	XXX
LUKA	100%	XXX
TOM'S DINER	100%	XXX

Step 5

The Royalty Department translates credits into dollars. At approximately \$3.38 per credit, 39 credits come to \$131. The publisher's share is approximately the same amount. (The value of a credit will vary from quarter to quarter depending on the amount of money available for distribution and the number of ASCAP repertory performances processed.)

Step 3

The song's performance credits are calculated, and the

Station Weight	Use Weight	Feature Multiplier	Strata Multiplier
(1.000)	(100%)	(1.298)	(157)

equals approximately 203 performance credits for that one performance.

Step 4

Again, this particular performance is combined in the Society's records with all the other performances of *TOM'S DINER* in the performance quarter and is reflected on the writer's performance record for the quarter.

Step 5

At approximately \$3.38 per credit, 203 credits come to \$686. The publisher's share is approximately the same amount.

Step 3

Once again, this particular performance is combined in the Society's records with all the other performances of *TOM'S DINER* in the performance quarter and it is reflected on the writer's performance records for the quarter.

Step 4

At approximately \$3.38 per credit, 441 credits come to \$1,491. The publisher's share is approximately the same amount.

Step 3

The song's performance credits are calculated in accordance with the formula

Station Weight	Use Weight	Feature Multiplier	Strata Multiplier
(1.000)	(100%)	(1.298)	(11)

which equals approximately 14 performance credits for that one performance.

Step 4

Just as with performances in the other media, this performance is combined in the Society's records with all the other performances of *TOM'S DINER* in the performance quarter and is reflected on the writer's performance records for the quarter.

Step 5

At approximately \$3.38 per credit, 14 credits come to \$47. The publisher receives approximately the same amount.

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provides an example of ASCAP's monitoring techniques by describing how ASCAP tracked the playing of one song, Suzanne Vega's "Tom's Diner," in several media in 1990.¹⁴⁴

Despite its apparent success, are all of ASCAP's members satisfied with the division of composers' royalties? With some exceptions, the answer seems to be yes.¹⁴⁵ Such a conclusion is consistent with recent work on the functioning of collective rights organizations. This work has concluded that members join collective rights organizations because separate enforcement of individual copyrights is inefficient.¹⁴⁶ However, the "cooperate or perish" nature of the organizations shapes the members' views: to a large degree, members acquiesce in the compensation schemes of these societies, despite the fact that there are numerous points for possible disputes, because they realize that without joint action no compensation would be forthcoming at all.¹⁴⁷

Even so, ASCAP has adjusted its composition and operating rules periodically to keep in tune (so to speak) with developments in the music business. In 1921, ASCAP amended its Articles of Association to ensure that at least three composers of "standard" (as opposed to "pop") tunes, and three "standard" publishers, would be on the Board at all times.¹⁴⁸ The Articles were also amended over the years to include

144. Today, changes at the tiny ASCAP/BMI competitor known as SESAC (Society of European Stage Authors and Composers) threaten to raise the stakes in the development of monitoring techniques, as recent Congressional testimony revealed:

SESAC has stated that it intends to establish a catalog of composers and publishers in niche markets. Its first target market is Hispanic music. It has announced plans to offer a revolutionary per use license.

Users will not be required to report music use. SESAC will use an automatic monitoring device that will listen to all licensees, and use known "fingerprints" to recognize music. In a reversal of the ASCAP and BMI approach, the SESAC system will report all known music use to the station as part of the service, and will bill automatically. SESAC has stated that it will make its repertoire publicly available in a usable way.

Music Licensing Practices of Performing Rights Societies: Hearings Before the Subcomm. on Intellectual Property and Judicial Administration of the Senate Comm. on Judiciary, 103d Cong., 2d Sess. 235-36 (1994) (statement of Edward G. Atsinger III, President and Chief Executive Officer, Salem Communications Corp.).

145. For an example of a recent dispute, see Ronald Sullivan, *O for a Song: Court Gives 33 1/3 Jingles*, N.Y. TIMES, Aug. 24, 1994, at B3 (discussing decision denying relief to ASCAP member and commercial "jingle" writer who complained of inadequate compensation rule). A major insurrection occurred in the 1950s when some championed the introduction of "one-member, one-vote," for Board and policy issue elections. See Hearings on the Policies of the American Society of Authors, Composers and Publishers, Before Subcommittee No. 5 of the Select Committee on Small Business, 85th Cong., 2d Sess., 578 (1958) (statement of John Glurtz) [hereinafter ASCAP Policy Hearings].

146. Besen et al., *supra* note 101, at 383-84, 390-92.

147. See BESEN & KIRBY, *supra* note 101, at 395-97 ("There will often be many license fees and distributions of revenues for which collective pricing is better for everyone than is individual pricing.").

148. Finkelstein, *supra* note 115, at 288.

new procedures for amending the Articles and Bylaws,¹⁴⁹ for voting,¹⁵⁰ and for arbitration and appeals of disputes.¹⁵¹ These changes, which reflect the increasing expertise of the organization, have been praised by commentators. The detailed expertise that ASCAP's "Classification Committee" had accumulated was illustrated during one set of Congressional hearings as they answered questions regarding the appropriate division of royalties.¹⁵² In general, commentators have positively assessed the sophistication of the statistical techniques employed to determine royalty allocations.¹⁵³

149. ASCAP Policy Hearings, *supra* note 145, at 229-34 ("Chronological List of Changes to the Bylaws").

150. *Id.* A major insurrection, led by John Glurtz, was repelled in part by some blunt talk from the indomitable Oscar Hammerstein, whose introduction was met by "applause," according to the transcript. Hammerstein can fairly be heard to roar as he speaks:

I think there is one basic thing that we ought to face, and that is that ASCAP is not, and does not pretend to be, a democracy. ASCAP is a group of property owners. . . . This is not a group of federated states, or a nation, or a commune. . . . [T]his is not the United States—it is more like United States Steel. Do not think that the people who own a whole lot of property in this, and many copyrights, are going to take one vote, the same as the man who owns one copyright. . . . [T]he day [that happens] ASCAP is going to be broken up. . . . [T]his is not a democracy. . . . This is a corporation. . . . [I]t is a group; it is a society—and it is a society of property owners. Let us admit we are capitalists, small and large. Whether we like that or not, that is what we are. . . . Make reforms. Make constructive suggestions. . . . Do whatever you please, but stop this crazy nonsense about the vote, the weighted vote. The weighted vote is with us. It has to be with us while there is a weighted group of catalogues. . . .

Id. at 579.

151. *Id.* at 233 ("Amendments to Bylaws of ASCAP Which Went into Effect on or About July 31, 1957," including new § 6D, "[Arbitration] Panel," providing for member appeals from ASCAP Board of Appeals, which heard appeals from the Classification Committee on royalty matters, and new provisions allowing "external" appeal to an arbitration panel comprised of three members from the American Arbitration Association in New York).

152. *Id.* at 70-71. The document reproduced is a minority (dissenting) report in the matter of a royalty class-assignment dispute involving a song entitled "Magic Circles," owned by the music publisher Edward Kassner Music Co., Inc. It describes an elaborate three-criteria test for determining whether a composition has become a "well-known and recognized copyrighted musical composition": (1) whether it has been recorded commercially by someone other than the composer/publisher; (2) whether there have been regular published copies; and (3) whether there have been ten or more commercial network radio performances. The dissent argues that these criteria were set up to satisfy the need for a "rule of thumb," *id.* at 70, but complains that members were not properly informed of the standard to be applied. *Id.* The dispute affords a splendid illustration of the detailed valuation procedures of a CRO (i.e., ASCAP) in action.

153. For instance, ASCAP's monitoring and record-keeping grew up in response to the demands on collective rights agencies. See, e.g., KOHN & KOHN, *supra* note 32, at 639 ("the performance revenues of a society are distributed under a system that awards performance fees on the basis of statistical surveys"). The literature on "network externalities" bears, albeit tangentially, on this point. Where there are network externalities, a consumer considering adoption of two technologies, an inferior one in period 1 and a superior one in period 2, must consider the number of other users who have (or will) adopt each rival technology; this is because one's utility is increased by being a "member" of a network with many other members. Standard operating systems for software, such as DOS and Windows, are a classic example. Economic models of consumer choice in these markets show that under a range of plausible conditions the "superior" technology available in period 2 will not be widely adopted, because its cost advantage is outweighed by the fact that most other

While antitrust enforcement after 1941 has appeared to constrain ASCAP somewhat,¹⁵⁴ its basic structure has remained the same. The imposition of a "rate court" of appeals to be administered by a federal judge in the Southern District of New York may appear a significant change. In fact, it merely formalized long standing ASCAP procedures for resolving member and licensee disputes.¹⁵⁵ Until 1981, the assigned rate court judge was never called on to resolve a fee-setting dispute. As in the past, "[a]ll fees were established by negotiation."¹⁵⁶ Even now resort to the judge is rare.¹⁵⁷

B. Patent Pools

As an illustration of unadorned private liability rules, few institutions compare to the patent pool. In a patent pool, multiple patent holders assign or license their individual rights to a central entity, which in turn exploits the collective rights by licensing, manufacturing, or both. Most importantly, the pool regularizes the *valuation* of individual patents—making, as the United States Supreme Court put it, "a division of royalties according to the value attributed by the parties to their respective patent claims"¹⁵⁸

Thus patent pools, like collective rights organizations in copyright, serve to regularize technology transactions. Indeed, at least one court has noted the similarity between ASCAP and patent pools.¹⁵⁹ Like ASCAP, patent pools serve a needed economic function: they significantly reduce the transaction costs of exchanging rights. When they are not being used as a cover for a cartel,¹⁶⁰ they add significantly to the ef-

consumers have chosen the less-valuable technology in period 1. Thus "lock in" results. See generally W. Brian Arthur, *Competing Technologies, Increasing Returns, and Lock-In by Historical Events*, 99 *ECON. J.* 116 (1989); Michael L. Katz & Carl Shapiro, *Technology Adoption in the Presence of Network Externalities*, 94 *J. POL. ECON.* 822 (1986). Similarly, firms that support a compulsory license in period 1, because of short-term cost advantages and a belief that others will support it, may lock the industry into a suboptimal transactional technology. A superior transactional technology might have emerged in period 2 given the incentive to create it. The compulsory licensing scheme removes this incentive. It might be possible to structure the compulsory licensing scheme so that it terminates if new transactional technology emerges.

154. See Rifkind, *supra* note 131, at 7-17 (providing a good, short summary of ASCAP's antitrust history).

155. See Jay M. Fujitani, Comment, *Controlling the Market Power of Performing Rights Societies: An Administrative Substitute for Antitrust Regulation*, 72 *CALIF. L. REV.* 103, 113-16, 134-36 (1984) (describing the current ASCAP procedures).

156. Rifkind, *supra* note 131, at 18.

157. See *id.* at 18 & n.86 (citing only three "rate cases" from 1981 to 1985).

158. *Standard Oil Co. v. United States*, 283 U.S. 163, 171 (1931).

159. See *CBS, Inc. v. ASCAP*, 562 F.2d 130, 136 n.17 (2d Cir. 1977) ("[O]n the surface, the pool of copyrights may be analogized to a pool of competing patents"), *rev'd sub nom.* *BMI v. CBS*, 441 U.S. 1 (1979).

160. On pools and cartels, see CARL KAYSER & DONALD F. TURNER, *ANTITRUST POLICY: AN ECONOMIC AND LEGAL ANALYSIS* 164 (1959) (role of patent pools in U.S. Gypsum, Masonite, and

ficient operation of the patent system,¹⁶¹ as many industries have discovered over time.¹⁶²

In many cases, pools are creatures of necessity. For example, where different firms hold patents on the basic building blocks of the industry's products, they will have to cross-license to produce at all.¹⁶³ This problem affected both the sewing machine industry in the 1850s and the aircraft industry in the early twentieth century.¹⁶⁴ Even where no single patent or set of patents is essential, however, firms in an industry often find that they engage in such frequent negotiations that a regularized institution with formal rules, or even general guidelines, is helpful in reducing transaction costs.¹⁶⁵ The economic literature on institutions explains this quite well: repeat-play makes it easier to reach agreement on any particular issue, because disparities tend to balance out over many transactions.¹⁶⁶

Patent pools function according to liability rules. Typically, firms are required to license into the pool all patents covering technology of

Hartford-Empire glass cartels). See generally George L. Priest, *Cartels and Patent License Arrangements*, 20 J.L. & ECON. 309 (1977).

161. I am not the first to make this point. See Alfred E. Kahn, *Fundamental Deficiencies of the American Patent Law*, 30 AM. ECON. REV. 475, 491 (1940) ("All things considered, it must be concluded that the pool is a distinct improvement over the patent law as originally contemplated in effecting technological advance under modern conditions.").

162. See *Pooling of Patents: Hearings on H.R. 4523 Before the House Comm. on Patents*, 74th Cong. 1140, 1144-45 (1935) [hereinafter *Patent Pooling Hearings*] (report by Charles A. Welsh, Jr., economist):

In all of the following major industries which the committee has included within the scope of its activities some form of patent consolidation are [sic] in use in an attempt to circumvent the existence of patent deadlocks and overlapping inventions: Automobile, agricultural machinery, aviation, building equipment and supplies, chemicals, communications, electrical-equipment industries, food industries, glass, machinery and machine equipment, mining, munitions, oil, office equipment and machinery, paper, radio, railroad equipment, rubber, steel, scientific instruments, utilities.

163. See, e.g., *International Mfg. Co., Inc. v. Landon, Inc.*, 336 F.2d 723, 729 (9th Cir. 1964) ("No commercially feasible [swimming pool skimming and filtering] device could be manufactured under one of the patents without infringing the other. For this reason, Cavenah and Pace were found to be blocking, or interlocking, patents."); *United States v. Birdsboro Steel Foundry & Mach. Co.*, 139 F. Supp. 244, 250-51, 259-62 (W.D. Pa. 1956) (holding defendants were justified in entering into agreement to cross license patents for cooling beds used in steel mills, where, in absence of such agreement, cooling beds embodying the best features of both defendants' patents could not lawfully be made, and neither the defendants nor the public could obtain any benefit without agreement).

164. See *IS NEW TECHNOLOGY ENOUGH?: MAKING AND REMAKING U.S. BASIC INDUSTRIES* 31-33, 45-47 (Donald A. Hicks ed., 1988).

165. An example of a pool such as this is the one formed by the early shoe machinery industry. See Ross Thomson, *Invention, Markets, and the Scope of the Firm: The Nineteenth Century U.S. Shoe Machinery Industry*, 18 BUS. & ECON. HIST. 140, 143 (1989) ("Patent control further strengthened [the] competitive positions [of the three largest firms] via pooling for the three major dry-thread firms (in conjunction with Elias Howe) . . .").

166. See, e.g., ELLICKSON, *supra* note 69, at 225-29; GARY J. MILLER, *MANAGERIAL DILEMMAS: THE POLITICAL ECONOMY OF HIERARCHY* (1992) (arguing that role of managers is to encourage a culture of cooperation that transcends short-term self-interest, which necessarily includes sacrificing some pay offs in some periods for longer-term net gains).

use to the industry.¹⁶⁷ In exchange, pool members are permitted to use any other member's technology for a set fee. Often these fees are calibrated to reflect the significance of the technology being licensed.¹⁶⁸ The first licensing pool was among members of the sewing machine industry beginning in 1856. It operated under these sorts of rules, as have many others, including the aircraft and automobile pools.¹⁶⁹

All patent pools share one fundamental characteristic: they provide a regularized transactional mechanism that takes the place of the statutory property rule baseline requiring an individual bargain for each transaction. But in most other respects, their characteristics vary. They range from huge, industry-wide institutions with dozens of members and hundreds of patents, to relatively simple arrangements that look like nothing more than multilateral relational contracts. The latter may border on terrain outside the scope of this paper—being not so much liability rules¹⁷⁰ as elaborate installment contracts. This Article focuses primarily on large pools, because they act as the closest substitutes to a state-mandated liability rule.

1. *Mega Pools*

The most well-documented industry-wide pools arose in the automobile and aircraft industries around the turn of the twentieth century. Through the use of pooling, representatives of the various members participate in the valuation of the patented technology. A pool committee determines the royalty that each licensee of pooled technology is charged.¹⁷¹ This basic structure also served the sewing machine, bathtub, door part, seeded-raisin, coaster brake, and other industries.¹⁷²

167. Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839, 888-93 (1990) (describing terms of radio, aircraft, and automobile pools).

168. For administrative convenience, the technology in the pool is usually divided into several broad classes. See, e.g., WILLIAM GREENLEAF, *MONOPOLY ON WHEELS* 242-47 (1961) (describing automobile patent pool administration); George Bittlingmayer, *Property Rights, Progress, and the Aircraft Patent Agreement*, 31 J.L. & ECON. 227, 232-35 (1988) (describing accounting system for aircraft pool).

169. See FLOYD L. VAUGHAN, *THE UNITED STATES PATENT SYSTEM* 62-67 (1956); Bittlingmayer, *supra* note 168, at 227-28; Merges & Nelson, *supra* note 168, at 888-91.

170. See *supra* Part I.A.1. (differentiating between liability rules and contract terms).

171. These committees take on variable forms. See, e.g., *Suni-Citrus Prods. Co. v. Vincent*, 170 F.2d 850, 851 n.2 (5th Cir. 1948) (suit regarding pool constituted as trust involving patents owned by private inventor and State of Florida):

The trust agreement, between Vincent, the State and the Trustee, purported to pool certain patents by assigning them to the trustee, and to create a trust committee under whose directions the trustee would act. The powers of the committee included: the right to fix royalties; the right to include, in licenses, price fixing limitations upon the licensed products covered by the Neal patent when the prices had been fixed by members of the committee appointed by the State or other state representatives acting by virtue of legal authority in the State of Florida; and the right to include, in the licenses, price restrictions on products manufactured and sold in the State of Florida if and when these prices are fixed by virtue of

The rationale for pools with these sophisticated administrative structures is well described in this passage from the 1935 congressional patent pooling hearings:

These various institutions have differed materially in the type of organization created by the agreements. Perhaps the loosest of all is the automobile manufacturers agreement, and obvious [sic] the most severe restrictions are imposed where the patents pass into the hands of a single owner, yet all these agreements have in common the principle that *within the industry, the individual monopoly created by patents is abolished in the form it is provided by statute and a different system is substituted more in harmony with the needs of that industry.*

[I]n the airplane cross-licensing agreement, after completely abolishing the monopoly of the individual inventor and opening every patent to every member of the association, it provides that a board of arbitrators may decide in any case what reward should be paid to individual patent owners and this is based not upon the official determination of patentability by the Patent Office, but upon *the unofficial determination of the importance of the invention by a board of arbitrators.*¹⁷³

Actually, the aircraft pool did not “arbitrate” all patent licensing requests. In its earliest incarnation, the pool aimed to eliminate ruinous litigation and divide royalties on patents existing at the time of the pool’s formation according to a set formula.¹⁷⁴ Apart from the

legal authority in the State of Florida. The trust agreement also fixed the percentage of royalties to be paid to the persons entitled.

172. VAUGHAN, *supra* note 169, at 40-50.

173. On the general theme of the superiority of “private ordering” in patent pools, see Willis B. Rice, *History of Patent Law*, in *Patent Pooling Hearings*, *supra* note 162, at 537. Despite the hostile tone of the pooling hearings, industry representatives sang the praises of administrative pooling arrangements. Consider the Testimony of Sidney R. Kent, President of Fox Film Corporation of New York:

[Representative] McFarlane: That brings us to this question: Do you think that a private corporation, having primarily a monetary interest, is a better group to have charge of and supervision of pooling of patents, rather than a governmental agency that might arbitrate and try to be fair to the industry as a whole?

Mr. Kent: You will not be offended with me if I answer that very frankly, will you Congressman—

Mr. McFarlane: Go ahead.

Mr. Kent: When I say to you that governmental operation of anything, from the standpoint of industry or manufacture, can not possibly be as efficient as private manufacture. . . .

Mr. Kent: [M]y personal opinion . . . is that if all the industry in this country were run as efficiently as the Bell Telephone and American Telephone and Telegraph . . . then we would have a pretty efficient set-up, both Government-wise and every other wise. . . . That is my personal opinion.

Id. at 501, 529-30.

174. See JACOB A. VANDER MEULEN, *THE POLITICS OF AIRCRAFT* 28 (1991) (original pooling agreement called for \$100 per airplane to major patentees, Glenn Curtiss and the Wright Brothers, up

“foundational” patents of Glenn Curtiss and the Wright Brothers, which earned millions of dollars in royalties for their holders under the pooling agreement,¹⁷⁵ most licensing was conducted on a royalty-free basis, with mutual forbearance from infringement suits as the real payment for the exchange.¹⁷⁶

Patents added to the pool after its formation were divided into two classes. Normal patents were licensed into the pool for all to use, with no special royalty payout going to the inventor or firm.¹⁷⁷ Exceptional patents earned ongoing royalties, in an amount determined by a formal arbitration procedure. Under the original contract creating the pool, known as the Manufacturers Aircraft Association (MAA), members agreed:

To submit claims for compensation in respect to airplane patents or patent rights hereafter acquired to a board of arbitrators consisting of one member appointed by the board of directors of the Association (Inc.), another by the subscriber making the claim, and a third by the other two, who shall determine the total amount of compensation, if any, to be paid for the same, and the rate of royalty to be paid toward such compensation by any subscriber desiring to take a license under such patent. (Art. V, pp. 4-5.)

To waive all claims as against each other for infringements prior to July 1, 1917 (Art. XIV, p. 13); to make various reports and to keep various accounts, etc.¹⁷⁸

to a maximum of \$1 million). The original agreement was amended to reflect the growing prosperity of the industry soon thereafter. See *Manufacturers Aircraft Ass'n, Inc. v. United States*, 77 Ct. Cl. 481, 487 (1933):

The [pooling] agreement required the plaintiff to pay the remaining 87 1/2 per centum of the royalties received from all sources in declared proportions of 67 1/2 per centum to the Wright-Martin Aircraft Corporation and 20 per centum to the Curtiss-Burgess Airplane & Motor Corp., Inc. The agreement also contained a provision to the effect that within the period prior to November 1933, whenever and if said 87 1/2 per centum payments to Wright and Curtiss had equalled a maximum of \$2,000,000 for each, the rate of royalty to be paid to plaintiff was automatically to change to a sum not exceeding \$25 an airplane.

175. VANDER MEULEN, *supra* note 174, at 57.

176. *Manufacturers Aircraft Association—Antitrust Laws*, 31 Op. Att’y Gen. 166, 169 (1917) (prepared at the request of the Secretary of War, who had asked for a ruling on the legality of the MAA under the antitrust laws; concludes that no antitrust violation had been committed because the pool facilitated competition among its members).

177. See, e.g., *Patent Pooling Hearings*, *supra* note 162, at 775 (statement of Frank H. Russell, President of the Manufacturers Aircraft Association):

Any member company, to become a member, after he has bought a share of stock has to agree to exchange all patents which he may have either for nothing, or, if he feels that the patent has cost him a lot of money or is of great advantage to the art, or is bringing something to the development in the process which did not previously exist, he has the right to ask for a special royalty, and that reference is then sent to a board of arbitration which is made up of a member representing him or himself, a member of the association, and a third member who is selected by the other two.

178. *MAA—Antitrust Laws*, 31 Op. Att’y Gen. at 169.

Since compensation requests were in practice limited to exceptional patents,¹⁷⁹ arbitrated valuations were by definition rare.¹⁸⁰ The pool's two-tiered approach created the danger of imprecise valuation, but the repeat-play nature of exchange allowed discrepancies to even out over time.¹⁸¹ Although one member might make out well on one technology by getting free access to a very valuable invention, the member on the short end of the deal would make up the difference in future transactions. Some measure of the transaction cost savings engendered by the pool may be reflected in the fact that the major patent holders, Wright and Curtiss, lowered their royalty rates after formation of the pool.¹⁸²

The internal structure of the MAA looked surprisingly like that of ASCAP. Voting was weighted by the economic value of the patents contributed by the founding members. This was so, according to the Attorney General's report which cleared the MAA of antitrust problems, because

[i]f all the manufacturers had been given equal voice in the Association (Inc.) the smaller manufacturers together would have been enabled to control the Association (Inc.), to wit, the agent of the parties in whose responsibility and vigilance the Wright-Martin and Curtiss corporations are so vitally interested. This conflict of interest accounts for the adoption of the voting trust agreement under which the Wright-Martin and Curtiss corporations named one trustee, the smaller manufacturers another trustee, and a party not favorable to either interest, namely, a member of the Advisory Committee, was selected for the third trustee.¹⁸³

A corresponding governance structure, weighted to reflect the respective patent holdings of the founding members, was built into the auto industry patent pool when it was formed in the early twentieth century.¹⁸⁴ But the similarities do not stop there: the two institutions

179. See *Patent Pooling Hearings*, *supra* note 162, at 775 (statement of Frank H. Russell).

180. For example, a requested arbitration involving Boeing's patented design for low-wing, twin-engine transport planes, said to have been used by Douglas and Lockheed, was noteworthy enough to warrant special mention in a history of the aircraft industry of the 1930s. See VANDER MEULEN, *supra* note 174, at 101.

181. Cf. *id.* at 27-28 ("[T]he agreement... was... an opening of the patents' use to most anyone, but under organized conditions that would facilitate the industry's development."); *MAA—Antitrust Laws*, 31 Op. Att'y Gen. at 170 (the MAA "instead of restraining trade facilitates competition among the subscribers of that association").

182. *MAA—Antitrust Laws*, 31 Op. Att'y Gen. at 167 ("The royalties to be paid under the cross-license agreement in respect to the patents of both the Wright-Martin and Curtiss corporations are materially lower than those previously demanded by the Wright-Martin Corporation alone.").

183. *Id.* at 172.

184. See GREENLEAF, *supra* note 168, at 246 (because of perception that original structure favored small manufacturers, "certain alterations in the agreement made concessions to the major manufacturers").

also shared a massive scale (the auto pool had 79 members and 350 patents when formed, over 200 members and 1,000 patents in 1932);¹⁸⁵ a two-tiered patent classification scheme;¹⁸⁶ an arbitration procedure for exceptional patents;¹⁸⁷ and an institutionalized end to ubiquitous litigation.¹⁸⁸

As with the MAA, most members of the automobile pool seemed content to rely on the blanket, royalty-free cross licensing that was also available under the pool.¹⁸⁹ What arbitration there was took place in a committee of knowledgeable industry participants.¹⁹⁰ The arrangement was lauded far and wide as a success, even by no less an opponent of the patent system than Walton Hamilton.¹⁹¹

Hamilton spoke of the success of the automobile pool as proof of the creaky substructure of the patent system. "A heterodox chapter," he concluded, "challenges the whole theology of the patent system."¹⁹² It was as if the need to reconstitute the property rights by contract—the need to create an administrative apparatus to deal with the rights—proved the irrelevance or inadequacy of those rights.

This Article takes a more optimistic view of the relationship between the patent system and patent pools. Without the property rights—backed by the threat of production-choking injunctions—the advantages conveyed by the pool would never have been realized. These advantages extended far beyond a cessation of patent hostilities. They included the institutionalized exchange of all manner of *unpatented*

185. *Id.* at 245-46.

186. In addition to the two tiers, many related groups of patents were excluded. "Not included were the following categories of patents: design and special styling; special classes of motor vehicles, such as trucks, tractors, fire-engines, ambulances, and motor-buses . . ." *Id.* at 245.

187. *Id.* ("Not included were . . . basic and revolutionary patents.")

188. *Id.* ("The plan . . . in large measure fulfilled the hope that the industry would be free of the heavy burdens of patent litigation.")

189. *Id.* ("[E]ach signatory enjoyed reciprocal privileges of free licensing. . . . The plan operated with unqualified success").

190. Telephone Interview with George Frost, Patent Lawyer, General Motors (retired), former General Motors representative to the American Automobile Manufacturers Association (AAMA) (Nov. 2, 1994).

191. See Walton Hamilton, *Patents and Free Enterprise*, reprinted in TEMPORARY NATIONAL ECONOMIC COMMITTEE, 76TH CONG., INVESTIGATION OF CONCENTRATION OF ECONOMIC POWER 122 (Senate Comm. Print 1941):

It is hard to think of a form of cooperation between competitors which has brought as much benefit to the public as the cross-licensing agreement in respect to the automobile. . . . The members of the trade are freed from the trouble and expense of struggling with patent problems. Their whole energies can go into improving their product, perfecting the process of manufacture, devising methods of marketing.

For more on Hamilton's general views of patents and monopoly, see *id.* (pointing to corporate abuses of patents and stressing system's contribution to monopoly).

192. *Id.*

technical information,¹⁹³ and the creation of a framework for the crucial task of standardizing sizes and configurations for car parts.¹⁹⁴ All this followed from the industry's establishment of the contractual liability rule, or institution. A recognition of these advantages lies behind the language of a 1935 congressional report on patent pools:

Each of these [patent pooling] agreements therefore represents the perhaps unformulated, but nonetheless definite and considered judgment of the leaders in that industry that it cannot exist under the patent law in the form in which that law was designed, and that progress demands a substitution for the law as created by statute and *the substitution of a new system of law by contract*.¹⁹⁵

It is hard to improve on this formulation: patent pools as a form of contractual governance that “*substitutes*” for life under property rule entitlements, or “patent law in the form in which that law was designed.”

2. *Small, Contract-Based Pools*

Our focus thus far has been on large-scale pools, because they are the closest substitutes to a congressional compulsory license scheme. Smaller, technology-specific pools may lack the kind of complex administrative structure required to characterize them as true liability rules, because they look too much like simple bilateral contracts. Yet, the domain of small-scale, bilateral contracts spills over inexorably into the domain of large-scale institutions. There is a sort of natural growth process that connects these two domains: recall ASCAP with its nine founding members, and the auto pool, formed around a single, pioneering patent.¹⁹⁶ Because the large oaks of formal institutions often grow from the small acorns of bilateral contracts, we cannot leave smaller pools completely out of our analysis.

Although diverse in organizational form, these pools, regardless of the particular industry or the scale of the institution, embrace the two principles of their larger cousins: (1) consolidate property rights in a central entity (i.e., the contract), and (2) establish a valuation mechanism—often a simple formula—to divide up the royalty stream. Most

193. See GREENLEAF, *supra* note 168, at 246 (noting that original pool design benefitted small companies especially, and “quickened the spread of technological knowledge to the far corners of the industry”).

194. *Id.* at 250 (calling standardization the “most enduring and massive contribution of the Selden controversy”). The Selden controversy concerned George Selden’s claim to be the exclusive inventor of the gasoline automobile. See *generally id.*

195. Rice, *supra* note 173, at 1128 (emphasis added).

196. On the importance of the Selden patent in the auto industry, see Merges & Nelson, *supra* note 167, at 889-90.

small-scale pools are often nothing more than multilateral contracts incorporating these two basic elements.¹⁹⁷

A noteworthy example of a simple pooling agreement is found in the davenport bed industry of the 1930s:

On November 3, 1916, a written agreement was entered into between the owners of the various patents [pertaining to folding davenport beds and similar devices], which provided for the granting of an exclusive license to the Seng Company . . . to manufacture and sell under all of said pooled patents, the specified royalties to be divided in stated proportions among the parties to said agreement. Of the total amount of said royalties, 33 per cent was allotted to the Pullman Couch Company . . .

. . . The license contract of November 3, 1916, was signed by the Davoplane Bed Company and also by the Pullman Couch Company, as well as by [two inventors], individually. The Pullman Couch Company "submitted" 13 patents to be controlled by the pool agreement, including two of the Bostrom patents, and the Davoplane Bed Company "submitted" 7 patents, including one of the Bostrom patents. [An individual inventor] likewise "submitted" one patent.¹⁹⁸

As Figure 2 illustrates, this simple contract integrated at least three transactions that would otherwise have been negotiated separately. More important, it translated the contribution of each of the three patent holders into a precise percentage of the royalty stream.¹⁹⁹ The pool's

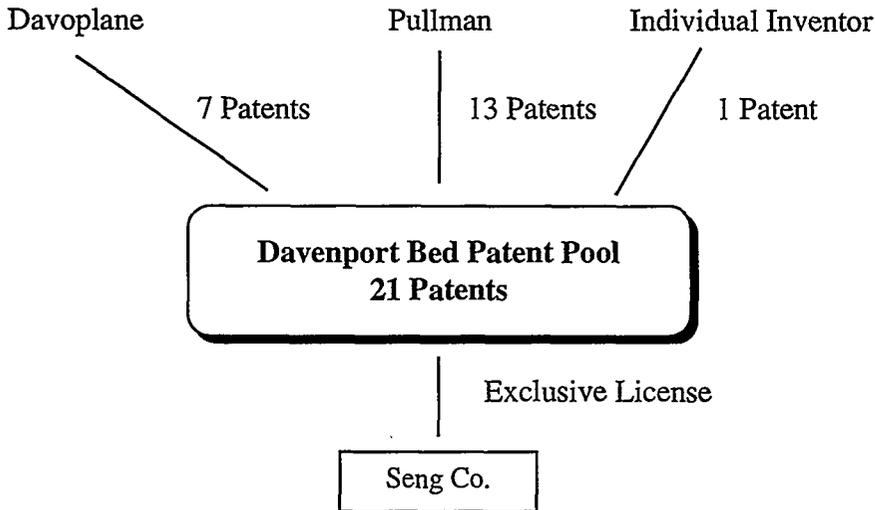
197. Indeed, a small line of cases deals with the enforceability of executory pooling agreements. See *Dial Toaster Corp. v. Waters-Genter Co.*, 233 N.W. 870 (Minn. 1930) (pooling contract calling for pool entity to license pooled patents "on the best royalty basis obtainable" held too uncertain to permit specific performance decree); *S. & B. Rubber & Chem. Corp. v. Stein*, 7 N.Y.S.2d 553 (N.Y. 1938) (ordering specific performance of pooling agreement).

198. *Kramer v. Commissioner*, 27 B.T.A. 1043, 1045 (1933). The description is drawn from a tax case apparently concerned with the income from the divided royalties. The case does not explain how several different entities came to own numerous patents issued to one inventor, the industrious Bostrom.

199. Royalty-free exchanges are also common, as in the case of the auto pool (described below). One case describes a patent pool that set up a royalty-free exchange of patents between two firms that concentrated on different technologies, but which occasionally made inventions relating to the other firm's "core" technology. The pool allowed mutual access to patents in the "core" technology of each firm. See *Cutter Lab., Inc. v. Lyophile-Cryochem Corp.*, 179 F.2d 80, 91-92 (9th Cir. 1949) (upholding legality of pool that was the *raison d'être* of the defendant Lyophile-Cryochem Corporation):

Sharp & Dohme, Inc., a corporation engaged in the manufacture and sale of drugs, owned a series of patents on processes, products, containers and machinery within the field of freeze-dried drugs, including the Reichel patent in suit. The F. J. Stokes Machine Co., which manufactures machinery and apparatus used in the manufacture of drugs, owned a similar series of patents, including the Flosdorf patent in suit. These two companies formed the appellee Lyophile-Cryochem Corporation, to which they agreed to transfer the exclusive power to issue licenses under all patents within the freeze-dried drug field which each party then owned or might in the future acquire, and they agreed to endeavor to acquire such patents from any of their employees who might be connected with new inventions within the field. They also agreed to cause the new corporation "to grant

FIGURE 2



exclusive licensee, the Seng Company, paid a fixed percentage to one entity (the pool) in assembling the “patent inputs” required to manufacture a state-of-the-art davenport bed.²⁰⁰ Pool members then split the royalty according to the formula in the pooling agreement.²⁰¹ Thus the

licenses to others on such terms as, consistently with the maintenance of the strength of its patent rights and the good reputation of the products made pursuant to the patents, shall encourage maximum sales of the products and minimize sales resistance, and such licenses shall not be unreasonably withheld.”

The court later explained:

Stokes, interested in the manufacture of freeze-drying apparatus, conducts research for improvements in that apparatus. In the course of that research, it incidentally discovers improvements in freeze-drying processes and freeze-dried medical products. It is entitled to a patent monopoly on those improvements, but it cannot directly exploit those patents without going outside its normal field, which is machinery. Sharp & Dohme, on the other hand, is in a position to exploit the improvements. Moreover it is faced with the same problem, for it is in no position to exploit directly the improvements in machinery which it discovers in the course of its research. It is consistent with the spirit, as well as the letter, of the patent laws that each of these two companies should arrange to use the other in order to reap the rewards to which it is entitled as patentee and yet which it is in no position to reap by itself.

Id. at 93.

200. Although the davenport bed pool was set up to cater only to the Seng Company as an exclusive licensee, many pools license multiple manufacturers. *See, e.g., Emile Indus., Inc. v. Patentex, Inc.*, 478 F.2d 562, 565 (2d Cir. 1973) (patent pool in women’s hosiery production equipment) (alterations in original):

Burlington and Chadbourn created Patentex in 1955 “to acquire title [from them] to patents and methods of manufacturing women’s stretch stockings and processing yarns used in their manufacture. . . . [Patentex] license[d] other hosiery manufacturers under their patents and in turn receive[d] royalties for their use.” Thus, in return for royalty payments, Burlington and Chadbourn allowed their competitors to employ knitting technology which they had patented.

201. For an example of a nascent pool that was seemingly organized before the parties truly reached agreement in these issues, see *Dial Toaster Corp.*, 233 N.W. at 871 (specific performance

patentees substituted a collective contractual framework for individually-bargained transactions.²⁰²

This arrangement is by no means unusual; a host of cases reveals similar contract-based pools in industries ranging from movie projectors²⁰³ and hydraulic pumps²⁰⁴ to swimming pool cleaners²⁰⁵ and polypropylene fiber production.²⁰⁶ In the Davenport Bed Pool, and all of

decreed sought on contract to pool toaster patents: "Plaintiff asserts that anything from 25 to 35 cents a toaster would be a reasonable royalty. Defendant put the figure much higher.")

202. Cf. *Baker-Cammack Hosiery Mills, Inc. v. Davis Co.*, 181 F.2d 550, 554 (4th Cir. 1950). The pool in this case involved a corporation formed in 1946 to pool the 15 patents beneficially owned by three firms in the men's hosiery industry, thereby enabling prospective licensees to deal with only one licensing source.

203. See Ralph Cassady, Jr., *Monopoly in Motion Picture Production and Distribution: 1908-1915*, 32 S. CAL. L. REV. 325 (1959). Discussing Edison's famous "Motion Picture Patents Corporation" (MPPC), Cassady describes in depth the complicated division of royalty income among the participants that was spelled out in the 1908 agreement between Armat, Biograph, Edison and Vitagraph. The four firms assigned "all of the patents of any importance in the early-day motion picture industry." *Id.* at 331. Royalties were to be paid into the pool by licensees of the pool's patents, i.e., movie exhibitors. On the role of the MPPC in the structure of the early film industry, see Catherine E. Kerr, *Incorporating the Star: The Intersection of Business and Aesthetic Strategies in Early American Film*, 64 BUS. HIST. REV. 383, 390-91 (1990). For a good fictional account of the battle between the "patent" (i.e., MPPC pool) and "non-patent" forces in the early movie industry, see the movie *NICKELODEON* (Columbia 1976).

204. *Kobe, Inc. v. Dempsey Pump Co.*, 198 F.2d 416, 420 (10th Cir. 1952) (the pool consisted of 70 patents and "the royalties exacted were a percentage of the proceeds of the sale of all pumps manufactured by licensees").

205. *International Mfg. Co., Inc. v. Landon, Inc.*, 336 F.2d 723, 729 (9th Cir. 1964) (emphasis added):

The trial court found that, although the two patents were issued at different times, they together covered only a single article. No commercially feasible device could be manufactured under one of the patents without infringing the other. For this reason, Cavenah and Pace were found to be blocking, or interlocking, patents.

Landon's first efforts to license manufacturers under the Cavenah patent alone were frustrated by the manufacturers' unwillingness to accept Cavenah without also being licensed under Pace. In order to end this impasse, Robert M. Pace, then owner of the Pace patent, and Landon entered an agreement whereby (1) the Pace patent was assigned to Landon, (2) Landon granted Robert Pace a royalty-free, non-exclusive license under both patents, (3) Landon promised to license the patents collectively only, and (4) *Landon and Robert Pace agreed to share royalties according to a set formula.*

No attempt was made to limit the number of licenses issued pursuant to this agreement.

All licenses were offered under uniform terms and conditions to all who wished licenses.

206. *Studiengesellschaft Kohle m.b.H. v. Dart Indus., Inc.*, 666 F. Supp. 674, 678 (D. Del. 1987):

Ziegler Pool Licenses . . . , granted jointly by Ziegler and Montecatini, gave licensees rights under both Ziegler and Montecatini patents at the standard sliding scale royalty rate of 5.5%. Montecatini, later known as Montedison, owned patents closely related to Ziegler's. Ziegler was to receive 30% of the royalties received under the Pool Licenses.

See also *United States v. General Instrument Corp.*, 87 F. Supp. 157, 181 (D.N.J. 1949) (radio vacuum tubes):

"[T]he grant on said three Letters Patents shall proceed from the Radio Condenser Company instead of the Condenser Development Corporation, it being understood that the royalties payable thereon and on the remaining patents of said licenses be payable to the second contracting party, the said royalties being in turn payable by the Condenser Development Corporation one half to the Radio Condenser Company and the other half to the General Instrument Corporation."

these pools, the simple administrative—i.e., contractual—structure ought not to divert attention from the significant conservation of transaction costs.

Despite differences in complexity and scale, these simple patent pools share several important features with the “mega-pools” for autos and aircraft studied earlier: expert valuation (in the form of negotiated royalty splits), a centralized transactional mechanism, and one-stop licensing for the non-member licensees. Indeed, after clearing away the tangle of detail that surrounds these real-world institutions, one is left with one enduring impression: that a well-functioning patent pool is the closest approximation we are likely to see of an ideal liability rule in action.

To be sure, regularizing transactions does not entirely eliminate all sources of high transaction costs in exchanging patents. The historical record shows pool members negotiating at length, usually over the valuation of particularly important patents. The extensive cross-licensing agreement between DuPont and Imperial Chemical Industries (ICI) of Great Britain, which resembled a pool in its complexity due to the magnitude of each firm’s chemical research efforts, provides several examples.²⁰⁷ Although the agreement lasted for more than ten years, there were disputes over an implicit contractual arrangement whereby certain “exceptional” inventions were placed outside the licensing

Sometimes, the contractual division of royalties is left unspecified, or at least open to negotiation—creating a pool by “relational” contract. *See* United States v. Birdsboro Steel Foundry & Mach. Co., 139 F. Supp. 244 (W.D. Pa. 1956). In *Birdsboro* the court upheld the legality of a pool between defendant Birdsboro and another firm Mesta. Birdsboro had the right to manufacture steel mill cooling beds for both semi-finished products and merchant mills, while Mesta had the exclusive right to sell into the merchant mill market. Birdsboro was to manufacture cooling beds for Mesta to sell in the merchant mill market, subject to the following “fair pricing” clause in the pooling agreement:

5. The prices at which Birdsboro shall sell cooling beds to Mesta shall be fair and reasonable, and comparable in general to prices paid by Mesta to Birdsboro for cooling beds already bought, with due allowance made for general increases or decreases in the cost of labor and materials, taxes, etc. In any event, the prices charged by Birdsboro shall be such as to enable Mesta to sell in competition with equipment offered by others, and to allow Mesta a reasonable profit for such resale in competition; *Provided*, however, that Birdsboro shall not be required to manufacture cooling beds at competitive prices which shall result in a loss to itself. Should Birdsboro be unwilling to accept the order from Mesta for a cooling bed on that account, then Mesta shall have the right, notwithstanding anything herein stated to the contrary, to build such cooling bed itself or to have it built by others.

Mesta shall use its best efforts to obtain such prices as to enable Birdsboro to make fair profits on the cooling beds herein contemplated. Mesta shall in no case quote prices for cooling beds without first having obtained prices from Birdsboro, unless such quotation is made based upon standard prices then in force between Mesta and Birdsboro.

Id. at 254. Here the price adjustment under the fair pricing clause effectively caps the implicit royalty Birdsboro can charge on the technology it contributed to the pool, which is a rough form of apportionment.

207. *See* DAVID HOUNSHELL & JOHN SMITH, SCIENCE AND CORPORATE STRATEGY: DUPONT R & D, 1902-1980 193-205 (1988).

framework created by the agreement.²⁰⁸ For these inventions—which included nylon and neoprene for DuPont, and polyethylene for ICI—the originating firm kept exclusive rights. According to an authoritative history of DuPont, this caused serious friction during the term of the agreement.²⁰⁹ In addition, there is evidence from a case involving another pool that, as one might predict, pool members act strategically in an effort to maximize their share of the pool's revenues.²¹⁰

Even apart from the continuing transaction costs during the operation of a pool, the costs of initially negotiating a pooling agreement will often be steep. These costs result from (1) differing assessments of the technological merits of the contributions by the members of the pool, (2) private information held by each member concerning the precise characteristics of the technology and the details of the patent position (all relevant prior art, etc.), and (3) strategic bargaining possibilities created by the negotiations over the potentially large "pooling surplus" that may result from the creation of the pool.²¹¹ The fact that pools have arisen so often in the past, despite these costs, says a great deal about the cost savings firms expect from these arrangements.

3. *Quasi-Pools: A Positive Role for Patents as "Bargaining Chips"*

Despite potentially high transaction costs, patent pools often do take shape; when they do, as we have seen, they collect a host of beneficial transactions under one roof. But talk of these transactional advantages leads naturally to a further question: can *informal* exchange

208. See *id.* at 199; 2 WILLIAM READER, *IMPERIAL CHEMICAL INDUSTRIES: A HISTORY* 53 (1975) ("[T]here was a clause allowing either party to remove a 'major invention' from the agreement altogether, so that they could make special terms.").

209. Even so, the arrangement proved basically workable, breaking down only when the U.S. government dissolved the arrangement as an antitrust violation. See *United States v. Imperial Chem. Indus., Ltd.*, 105 F. Supp. 215 (S.D.N.Y. 1952).

210. See *Hazeltine Research, Inc. v. Zenith Radio Corp.*, 239 F. Supp. 51, 72 (N.D. Ill. 1965) (emphasis added):

The dominant radio and electronics companies in Great Britain set up the British Patent Pool into which flow thousands of patents owned or controlled by the members and those affiliated with them in the plan. . . . The Hazeltine inventions and patents have been funneled into the Pool pursuant to an agreement with General Electric Co. Ltd. and the share of the Pool's income allocated to these patents is split between General Electric Co. Ltd. and Hazeltine. Pursuant to this arrangement British inventions controlled by General Electric Co. Ltd. are licensed to Hazeltine for exclusive licensing use in its American territory and are included in its United States package licensing activities. *The Hazeltine-General Electric Co. Ltd. exclusive agreements were specifically devised to get the Hazeltine patents into the British Patent Pool in a manner which would provide for G.E.C. maximum bargaining power vis-a-vis the other Pool members on the division of the Pool income.*

211. See generally, Stefan Fölster, *Firms' Choice of R & D Intensity in the Presence of Aggregate Increasing Returns to Scale*, 13 J. ECON BEHAV. & ORG. 387 (1990); Suzanne Scotchmer, *Standing on the Shoulders of Giants: Cumulative Research and the Patent Law*, 5 J. ECON. PERSP. 29 (1991) (discussing the problem of pooling and negotiations in the context of cumulative research). On the possibility of bargaining breakdown in IPR transactions, see Merges, *supra* note 62.

norms also serve to regularize transactions in an industry? To put it another way, if pools can sometimes "substitute" for property entitlements, and if simple contracts can sometimes take the place of pools, can informal exchange norms emerge that serve some of the same functions as actual contracts?

In the semiconductor, consumer electronics, and chemical industries patents have long been used as bargaining chips.²¹² They facilitate technology trades, or at least settle or fend off infringement suits in a convenient way.²¹³ In other words, these industries have evolved a norm under which patents are used primarily as "currency" in cross-licensing.²¹⁴ Perhaps this norm emerged because of economic forces in the industry such as rapid development and mutually interdependent research efforts. Under certain circumstances, it would be rational systematically to forego full enforcement of property rights in exchange for reciprocal forbearance from competitors. In any event, these industries have developed exchange regimes based on property rule entitlements (patents) that have many earmarks of a well-functioning liability rule. Again, as we saw with both large-scale pools and their smaller, contract-based cousins, predictable expert valuation rules substitute for individuated arm's-length bargains. In an operational sense, then, a loose "liability rule" exchange system prevails.²¹⁵

There are two key indicators that the operative norm at work in these industries deviates from the structure of the initial property rule: permission is not always sought first, and each firm agrees roughly on the value of individual patents. The legal right to exclude is rarely enforced fully, and firms do not always seek permission of the right holder first. Often they appear to go on about their business, sometimes infringing other firms' patents in the process, with the intention of "settling up" later. Since industry members share a sense of the worth of individual patents, it is easy for firms to "trade off" infringement liabilities when they "settle up." Remaining "balances" are then paid off in money damages.

It is not incidental that informal norms, and the patent pools whose operation they emulate, function best where they are run by a close-knit

212. See JOHN TILTON, *INTERNATIONAL DIFFUSION OF TECHNOLOGY: THE CASE OF SEMICONDUCTORS* 16 (1971).

213. *INTELLECTUAL PROPERTY RIGHTS IN SCIENCE, TECHNOLOGY AND ECONOMIC PERFORMANCE* (Frank Rushing & Connie Brown eds., 1990) ("[I]n each of these industries [that ranked patents low on the scale of appropriation mechanisms in a survey] at least half of the patentable inventions were patented. The reason seems to be that the prospective benefits of patent protection, including (besides royalties) whatever delay is caused prospective imitators and the use of patents as bargaining chips, are judged to exceed costs.")

214. See, e.g., *Intel Corp v. ULSI Sys. Tech., Inc.*, 782 F. Supp. 1467 (D. Or. 1991) (dispute over cross-license involving patented 8087 math coprocessors), *rev'd*, 995 F.2d 1566 (Fed. Cir. 1993).

215. See *Merges & Nelson*, *supra* note 167, at 888-93.

group of experts with shared understandings of the technology, industry, and entitlements structure.²¹⁶ Indeed, firms share such an understanding of how the process works that they sometimes institutionalize the arrangement in advance by means of extensive cross-licensing agreements. My positive account of industry cross-licensing norms contrasts with traditional descriptions. Some commentators, for instance, have argued that when patents serve only as bargaining chips, they serve no useful purpose, except possibly to restrict entry into an industry.²¹⁷ Others, while not condemning the practice outright, have appeared puzzled by this use of patents; it seems anomalous in light of accepted theories of patent protection, which emphasize the need for incentives to offset the "public good" aspects of technology and the products that embody it.²¹⁸

These two groups have failed to recognize that patents can be used as a mechanism of exchange among firms—a sort of currency of technology transfer—that permits limited appropriability within a circle of industry participants. Patents subject to a cross-licensing norm facilitate technology trading within an industry or sub-group, while permitting full enforcement against infringing consumers or non-participating manufacturers. True, this practice can serve as a barrier to entry. But it is not clear—absent employment of cross-licensing as a ruse for price fixing or other cartel activities—why this is any different from the exclusionary power of a single firm's portfolio of patents. And, while it may take time for an entrant to accumulate its portfolio, this may simply be a function of "natural" entry barriers, e.g., those stemming from requirements for a high degree of technical sophistication to manufacture the industry's products. Stated another way, it is not clear why a firm should be required to limit its "circle of appropriability" to itself, rather than enlarging it to include other cooperative industry members. Indeed, when the cross-licensing norm is not fronting for more sinister collusion, and as long as patents are really used as bargaining chips, these arrangements take on the appearance of loose patent pools. These informal exchanges therefore have a great deal of pro-competitive appeal, insofar as they reduce the transaction costs of exchanging technology and IPRs.

216. Compare this type of close-knit group of experts with those discussed in Ellickson, *supra* note 65. See also ELLICKSON, *supra* note 69.

217. See, e.g., Cecil Quillen, *Proposal for the Simplification and Reform of the United States Patent System*, 21 AM. INTELL. PROP. L. ASS'N Q.J. 189, 195 (1993).

218. See Paul David, *Intellectual Property and the Panda's Thumb*, in SCIENCE, TECHNOLOGY AND INTELLECTUAL PROPERTY (NATIONAL ACADEMY OF SCIENCE REPORT, 1993).

4. Patent Pools and Government Policy

In light of this Article's depiction of the benefits of patent pools, I next examine the question of the appropriate government policy response towards patent pools. This Section concludes that not only should the government exercise restraint in banning pools as violations of antitrust policy, but also that the government may consider assisting the creation of patent pools. Even if this bolder suggestion is rejected, the government should at least maintain a neutral and permissive stance towards patent pools.

Patent pools—at least formal ones—are relatively rare in the current era.²¹⁹ This rarity might undermine this Article's thesis that private collective rights organizations are likely to emerge to overcome the roadblocks imposed by property rule entitlements. But federal antitrust policy is the most likely explanation for the small number of patent pools existing today. Ever since myriad forms of inter-firm cooperation were condemned in the "trust-busting era,"²²⁰ firms have been reluctant to initiate industry-wide arrangements of every ilk, including pools.²²¹

Antitrust enforcement deters the establishment of patent pools in three ways. First, government enforcement activity often leads to significant liability and operating restrictions under consent decrees.²²² Second, the threat of an antitrust suit by a licensee or would-be pool participant could put powerful downward pressure on the pool's royalty prospects. Third, and perhaps most importantly, the threat of an antitrust suit by a *member* of the pool could be used to influence royalty or use negotiations. The threat of destabilizing intervention into the private ordering system could quite plausibly compromise the integrity of a pool's valuation procedures, thus undermining a major advantage of the pool arrangement. These threats imposed by even the latent (and,

219. There are some signs, however, that after a protracted period of liberal antitrust enforcement, pools may be making a comeback. See *New Video Technology Faces Mega-licensing Woes: MPEG II May Be Open, But It's Also Highly Proprietary; CableLabs Tries To Create Voluntary Patent Pool*, INFO. L. ALERT, Feb. 14, 1995, at 1:

There are at least nine companies on three continents holding patents that stand in the way of MPEG II taking root in the real world. * * * As this issue went to press, key patent holders were meeting to try to establish a voluntary licensing entity to which they would contribute licensing rights. Users of MPEG II would then be able to shop in one place to obtain the right to use the key technology underlying MPEG (Motion Picture Experts Group) II. People involved in the effort say the task will not be easy but that it is too important not to happen.

See also the following Westlaw documents concerning further progress in forming the same pool: 1996 WL 8913571; 1995 WL 2399934.

220. These are reviewed in Donald Turner, *Legal Restrictions on Exploitation of the Patent Monopoly: An Economic Analysis*, 76 YALE L.J. 267 (1966).

221. See Thomas M. Jorde & David J. Teece, *Innovation, Cooperation, and Antitrust: Striking the Right Balance*, 4 HIGH TECH. L.J. 1 (1989).

222. See, e.g., Bittlingmayer, *supra* note 168, at 230-35 (describing break-up of aircraft pool under the weight of a consent decree).

increasingly, historically distant) threat of government antitrust action appear to have been enough to make pool formation prohibitively risky.²²³

Perhaps the declining popularity of patent pools stems from their role in facilitating cartels, which are now more vigorously pursued by antitrust authorities.²²⁴ Nevertheless, the relative scarcity of pools on the present landscape—especially given the increasing presence and strength of patents in many industries—suggests a classic case of excessive deterrence. The optimal antitrust policy would neither completely accept nor reject patent pools.²²⁵

Although revising the antitrust test applied to patent pools would be a good start, we should go further. The government should assist in some cases the formation of pools and other exchange mechanisms. Some pools have been formed only when a “visible hand” helped overcome the collective action problem inherent in group bargaining. In several cases where the government was concerned that technology useful to the military was not being developed because of a logjam of conflicting property rights, the lurking threat of the eminent domain power contributed to the formation of patent pools.²²⁶ In at least one

223. The explicit antitrust “safe harbors” for industry-wide research consortia have contributed to the success of this form of R & D organization. See Jorde & Teece, *supra* note 221, at 74-75.

224. I mean to suggest that antitrust enforcement activities directed at patent pools have not always, or even usually, been misguided. In some cases, pools were so clearly masking cartels that they had to be broken up. See, e.g., *United States v. National Lead Co.*, 63 F. Supp. 513, 523 (S.D.N.Y. 1945), *aff'd*, 323 U.S. 319 (1947).

225. This Article is not the place to set the appropriate antitrust standard for patent pools, but the tools do seem at hand to construct such a test. The earlier contribution by George Priest, stressing the degree of technological integration as the key indicia of a pro-competitive pool, is a good starting point. See Priest, *supra* note 160. To this might be added that the determinations necessitated by the Priest approach are not unmanageable; they amount to no more than a large-scale application of standard tests for patent infringement. On these tests, see MERGES, *supra* note 13, at ch. 8. Where industry members are seen to pervasively infringe each other's patents, and where valuation and exchange mechanisms appear to serve no ulterior purpose beyond setting compensation for these infringements, a real working pool is in effect.

At a minimum, pools that reduce the volume of licensing and lead to greater technological integration ought to be considered presumptively legal, whereas pools that do not add to inter-firm technology adoption ought to be suspect. Surprisingly, though one might suppose that such a test would be difficult to administer, a quick review of the reported cases suggests otherwise. Perhaps fortuitously, the pools described in the case law seem to fall fairly readily on one side of the line or the other.

A different set of issues is presented where the pool is created out of a research program funded by the government. Fairness and access issues are more compelling under those circumstances. See *Semiconductor Industry: CEO Testifies on Challenges Facing U.S. Firms*, EDGE, Aug. 5, 1991.

226. Bittlingmayer, *supra* note 168, at 230-32; Dykman, *Patent Licensing within the Manufacturer's Aircraft Association (MAA)*, 46 J. PAT. OFF. SOC'Y 646 (1964) (describing formation of industry licensing pool, at behest of government, because, “[n]o one would license the other under anything like a reasonable basis”). See generally Merges & Nelson, *supra* note 167. See also *General Tire & Rubber Co. v. Firestone Tire & Rubber Co.*, 489 F.2d 1105, 1107-08 (6th Cir. 1973) (describing a dispute arising from a World War II patent pool formed at the request of the U.S.

case, the aircraft industry, a long-term industry patent pool was formed in the wake of the government's forced licensing; this pool itself embodied an interesting governance structure built on an industry-wide practice of technology exchange through IPR licensing.²²⁷ The emergence of these pools suggests an interesting avenue for future government policy: encouraging firms to contract around their patents, perhaps as an alternative to more forceful government intervention.

The European approach regarding CD-ROM patents serves as an example of this policy.²²⁸ The U.S. could take similar steps. For example, a small group of technology exchange officers could bring together firms wishing to explore the possibility of pooling. Such an effort would also give the government a chance to prevent the most egregious misuses of pooling arrangements.

At the very least, government policy should be neutral when an industry proposes the formation of a patent pool. The key to antitrust enforcement should be the bona fide efforts of people in the industry—including engineers and researchers—to value the technology administratively. Although, as I have argued, court *valuation* is ineffective, court *oversight* of the institution charged with valuation ought to be

government and administered by the Reconstruction Finance Corporation (RFC) in the area of synthetic rubber research). The pool in *General Tire* was formed immediately after Pearl Harbor, according to the court, by the signing of contracts between the RFC and the big four of the rubber industry (Goodyear, U.S. Rubber, Goodrich, and Firestone), both to manage and operate the synthetic rubber plants and to pool patents and conduct research for the government, the results of which would be shared royalty-free with the government and its "nominees" (i.e., the other rubber companies participating in the research agreements).

The organizing contract for the pool read in part as follows:

7. Contractor hereby grants to RFC and its nominees (1) a royalty-free license to utilize without limitation any information or invention (whether or not patented) resulting from the research authorized by this contract, including the right to reproduce, disclose to others, and publish all such information or inventions, and including the right to make, use and sell thereunder, and (2) a royalty-free license to use any information or invention to which RFC or its nominees are entitled under the provisions of paragraph 5 above, including the right to reproduce, disclose to others, and publish all such information or inventions, but limited to the utilization of the same in the production, use or sale of general purpose synthetic rubber suitable for use in the manufacture of transportation items such as tires or camel-back, and (3) a royalty-free license with respect to any information or invention made available under the provisions of paragraph 6 above, limited to the utilization of the same in the manufacture, use or sale of rubberlike polymers, copolymers, mixed polymers and interpolymers of the compositions defined in paragraph 3 above.

Id. at 1143.

227. See Bittlingmayer, *supra* note 168, at 232 (in 1917, following U.S. entry into World War I, "Congress passed legislation that would have condemned the patents," thus spurring the parties to negotiate an agreement).

228. Richard L. Holman, *Europe Advances Digital Gear*, WALL ST. J., Dec. 21, 1992, at A6:

The European Community Commission tentatively approved cross-licensing and other agreements between electronics companies to encourage development of digital compact cassettes and players. Firms and researchers may make, use or sell the products patented to other partners in the group. The EC said its move could restrict competition through pooling of patents, know-how and common specifications, but would advance technology and serve consumers.

tractable.²²⁹ Perhaps where bona fide technology valuation cannot be separated from cartelization, market division, and the like, pools should be restricted or abolished.

Work by antitrust scholars Thomas Jorde and David Teece in recent years lends credence to these conclusions. Jorde and Teece argue in favor of liberal antitrust treatment of inter-firm cooperation, including but by no means limited to joint ventures and "information sharing."²³⁰ While they generate their predictions from a Schumpeterian-innovation framework, and couch them more in terms of antitrust policy, in broad terms I share the conclusion that policy ought generally to favor inter-firm cooperation.²³¹

C. IPRs and the New Institutionalism Literature

This Section attempts to situate the IPR institutions reviewed above within the context of the "new institutionalism" literature discussed in Part I.²³² Ostrom, whose studies of water basins were reviewed in Part I, provides a useful summary of eight "design principles" of CROs. See Figure 3. The IPR institutions discussed in Part II highlight the importance of several of Ostrom's principles.

Principle 2, the proportionality between a member's contribution to the institution and the member's claim on common resources,²³³ is at the heart of IPR valuation and royalty splitting within CROs. Ostrom's principle, which calls for proportionality between appropriation and provision rules—essentially, between the amount of the common resource an individual extracts and the amount of labor or money she contributes—is reflected in both ASCAP and patent pools. ASCAP has evolved complex formulas for the division of royalties;²³⁴ so too patent pools, in which royalty splits are determined by contractual provisions and arbitration procedures. Royalties serve the same function as the water allocation rules Ostrom studied: ensuring fair (i.e., proportional) compensation, by calculating royalty splits based on the worth of the patents contributed by each member.

229. See *U.S. v. ASCAP*, 1950-1 Trade Cas. (CCH) ¶ 62,595 (S.D.N.Y. 1950) (the effective "rate court" appeals process codified in part IX of the ASCAP consent decree).

230. Jorde & Teece, *supra* note 221, at 20 (extolling virtues of cooperative R&D and marketing efforts).

231. For the ideas of J. Schumpeter, see JOSEPH A. SCHUMPETER, *CAPITALISM, SOCIALISM, AND DEMOCRACY* (1950).

232. See *supra* Part 1.C.

233. Cf. Pirrong, *supra* note 67, at 254-55 (concluding from review of successful and unsuccessful commodity exchange organization efforts that they succeed when the benefits of the exchange are expected to be distributed roughly equally across members).

234. See Figure 1.

FIGURE 3

From Elinor Ostrom, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* (1990), p. 90.

Table 3.1. *Design principles illustrated by long-enduring CPR [Common Property Resource] institutions*

1. **Clearly defined boundaries**
Individuals or households who have rights to withdraw resource units from the CPR must be clearly defined, as must the boundaries of the CPR itself.
 2. **Congruence between appropriation and provision rules and local conditions**
Appropriation rules restricting time, place, technology, and/or quantity of resource units are related to local conditions and to provision rules requiring labor, material, and/or money.
 3. **Collective-choice arrangements**
Most individuals affected by the operational rules can participate in modifying the operational rules.
 4. **Monitoring**
Monitors, who actively audit CPR conditions and appropriator behavior, are accountable to the appropriators or are the appropriators.
 5. **Graduated sanctions**
Appropriators who violate operational rules are likely to be assessed graduated sanctions (depending on the seriousness and context of the offense) by other appropriators, by officials accountable to these appropriators, or by both.
 6. **Conflict-resolution mechanisms**
Appropriators and their officials have rapid access to low -cost local arenas to resolve conflicts among appropriators or between appropriators and officials.
 7. **Minimal recognition of rights to organize**
The rights of appropriators to devise their own institutions are not challenged by external governmental authorities.
- For CPRs that are parts of larger systems:*
8. **Nested enterprises**
Appropriation, provision, monitoring, enforcement, conflict resolution, and governance activities are organized in multiple layers of nested enterprises.

These institutions also embody Ostrom's Principle 3, since they include collective choice arrangements, or institutional "voting rules," which are the framework within which member representation issues are resolved. Collective choice rules that exhibit roughly proportional representation are also a prominent feature of ASCAP and the pools. Just as in Ostrom's institutions, the founders of these IPR institutions set up detailed governance structures to provide a forum for valuation, monitoring, and dispute settlement. ASCAP's board composition and membership voting procedures, and the adjustments to the aircraft pool's administrative structure detailed earlier both bear witness to the presence of these concerns in intellectual property institutions. These collective choice rules structure and channel member dealings into regularized patterns. Innumerable operating procedures and rules of thumb emerge out of the ongoing governance process. When these institutional rules eliminate the need for discrete, repeated individual dealings, transaction cost savings are realized. Ostrom's Principle 4, which emphasizes the importance of monitoring systems, is found in procedures such as ASCAP's detailed survey mechanism.²³⁵

Ostrom observed another feature of common property resource regimes: they often start as small-scale arrangements among only a few participants. This pattern is seen in our review of ASCAP and the patent pools. The nine founders of ASCAP grew into the 100,000 members of today; the auto patent pool, which at one point encompassed over five hundred patents and one hundred firms, began as a concerted effort to license a single basic patent. This principle of starting small and growing big, together with a few additional considerations of special importance in the intellectual property context, is embodied in Figure 4, a list of Design Principles for IPR Exchange Institutions in the spirit of Ostrom.

The IPR institutions discussed here differ from Ostrom's institutions in form and operation. Yet they follow closely Ostrom's principles. The congruence suggests more overlap than one might suspect between the problems of allocating a shared natural resource and transacting repeatedly in abstract property rights. It suggests that Ostrom's ideas are very robust indeed.

235. In addition, the world of patent pools shares another commonality with the institutions studied by Ostrom: some organizations fail. *See, e.g.*, OSTROM, *supra* note 53, at ch. 5 ("Analyzing Institutional Failures and Fragilities"); *Stanford, California Push Patent-Pool—With Caution*, BIOTECHNOLOGY NEWSWATCH, Mar. 21, 1983, at 5 (describing patent pool proposed by University of California and Stanford in biotechnology field—which never got off the ground).

FIGURE 4
DESIGN PRINCIPLES FOR IPR EXCHANGE INSTITUTIONS

1. Start small, perhaps with simple bilateral contract(s)
2. Include members with low mutual monitoring costs, such as other participants in "input" market for IPRs
3. Assign knowledgeable industry members to the key task of <i>valuing</i> information/IPRs
4. Include grievance/dispute resolution procedure that is staffed by experts and gives a quick response
5. Structure internal governance to reflect interests of each distinct class of members
6. Carefully manage relations with external government authorities

III
EMERGENCE OF EXCHANGE INSTITUTIONS IN THE
ABSENCE OF PROPERTY RIGHTS

The attention this Article grants "contractual liability rules" is an application of Oliver Williamson's admonition to make the *transaction* the standard unit of economic analysis.²³⁶ By fixing our gaze on post-entitlement contracting, we have been able to see the pattern of exchange and interactions that follows from the initial grant. We now glance to the side to examine a related topic: the private IPR institution that arises without benefit of any formal entitlement at all.

These institutions, which I shall call *private intellectual property systems*, are pertinent because they occupy a highly eccentric orbit in the property rights cosmology initiated by Calabresi and Melamed. Because they involve no property rights, they pose a challenge to our model, which places property rights at the center of the planetary system whose movements we observe. With private intellectual property systems, the centrality of state-granted entitlements gives way entirely. Transactions, not entitlements, are the starting point from which economic activity follows.

To date, I have identified five private IPR systems: the Hollywood "script registry" run by the Writer's Guild of America, employee idea submission/compensation (i.e., "suggestion box") programs,²³⁷ infor-

236. This is a major premise of Williamson's authoritative work. See WILLIAMSON, *supra* note 3.

237. See Brian D. Wright & Barry Weinmann, *Markets in Hierarchies: Employee Suggestion Systems and the Theory of Labor Contracts* (Jan. 1995) (working paper, U.C. Berkeley Dept. of

mal know-how trading among certain manufacturing firms,²³⁸ the voluntary fashion design protection schemes initiated by several women's fashion industries in the 1930s, and computer shareware.²³⁹ Of these five, I will briefly discuss two: the script registry system and the "fashion guilds." The goal is to describe them in enough depth to appreciate how they differ from the institutions that are at the core of this Article, and perhaps to infer from these differences what contribution formal, state-granted property rights can make to industry transactions and the formation of institutions.

There are undoubtedly other institutions that perform a similar function;²⁴⁰ most notably, recent international agreements under which large pharmaceutical companies pay for exclusive rights to the "germplasm" resources controlled by developing country firms or agencies.²⁴¹ But my discussion will be limited to the fashion guild and the script registry.

Agricultural and Resource Economics) (concluding that suggestion box systems do elicit extra ideas from employees, but that compensation for ideas falls below predicted levels).

On legal review of disputes arising out of idea submissions, see ROBERT P. MERGES ET AL., *State Law Protection of Intellectual Property*, in *INTELLECTUAL PROPERTY IN THE NEW TECHNOLOGICAL AGE* ch. 6 (1995).

238. See ERIC VON HIPPEL, *THE SOURCES OF INNOVATION* (1988); Eric von Hippel, *Cooperation Between Rivals: Informal Know-How Trading*, 16 RES. POL'Y 291 (1987).

239. Shareware is computer software that "sellers" make available through catalogues and over the Internet for free, in exchange for payment on the honor system if the user finds it useful.

240. For example, there are private IPR aspects to a recently announced agreement among large food concerns to mediate trademark disputes. See Ellen Joan Pollock, *Food Concerns Opt to Mediate, Not Litigate*, WALL ST. J., Feb. 11, 1993, at B1:

Competitors including General Mills Inc., Kellogg Co. and Ralston Purina Co. have signed a pact promising to mediate trademark, packaging and marketing fights that arise among them. Cliff L. Whitehill, general counsel of General Mills, says the group hopes that an additional 50 food companies will eventually sign the pledge.

...

The food industry pledge calls for companies to try to mediate problems that can't be solved in 30 days without a neutral go-between. If the dispute is not settled after a mediator has been involved for at least 60 days, the parties can resort to the usual courtroom melees.

241. In Robert P. Merges, *Rainforest Preservation and Patents: Problems with the Property Rights Approach* (August, 1994) (working paper on file with author), I argue that the low frequency of these transactions, coupled with high policing and enforcement costs, make such private contracts preferable to a worldwide system of intellectual property rights in indigenous plant and animal species. The most prominent example of such a transaction is the Merck-InBio deal, under which Merck is to pay substantial sums over ten years for the right to "prospect" for pharmaceutical compounds contained in the plant and animal species in the huge land holdings of InBio, a specially-created government environmental agency in Costa Rica. For a different view, see Roger A. Sedjo, *Property Rights, Genetic Resources, and Biotechnological Change*, 35 J. L. & ECON. 199 (1992) (arguing for creation of such a system of property rights).

A. Fashion Guilds of the 1930s

In 1932, fifteen manufacturers of expensive women's dresses organized the Fashion Originators' Guild of America.²⁴² Guild members agreed to register original designs, which were (and are) *not* protected by patent or copyright law,²⁴³ with the Guild's "registration bureau," and to refrain from copying other members' designs. Moreover, each Guild member agreed to impose a "declaration of cooperation" on all retailers who sold the member's dresses. In the declaration retailers agreed not to sell copies of any clothing designs registered by the Guild. The agreements signed by retailers called for an elaborate system of arbitrated dispute resolution, administered by industry insiders, which included a right of appeal.²⁴⁴ The Guild engaged in extensive policing activities, sending "detectives" to retail stores throughout the country.²⁴⁵ When a violation was detected and duly prosecuted, the Guild assessed fines, which appeared to be substantial in some cases.²⁴⁶

By 1936 the Guild had grown significantly, extending its reach and expanding its eligibility to include all firms selling dresses at \$3.75 and up; membership grew from the original fifteen manufacturers to 176, and about 12,000 retailers signed up.²⁴⁷ In 1936 Guild members sold over 38% of all women's garments wholesaling for \$6.75 or more, and more than 60% of those at \$10.75 and above. A parallel set of agreements with textile producers was put in place, under which textile producers agreed to sell their products only to manufacturers in the Guild.²⁴⁸ The Guild was so successful it spawned a copy of its own: Millinery Creators' Guild, Inc., organized to protect women's hat designs.²⁴⁹

In addition to protecting members against the copying of their original designs, the Guild restricted members' advertising, prohibited door-to-door sales, coordinated days for special sales, and, most dam-

242. Maurice A. Weikart, *Design Piracy*, 19 *IND. L.J.* 235, 252 (1944). Expensive dresses were those selling for \$22.50 and up. See *William Filene's Sons Co. v. Fashion Originators' Guild of America, Inc.*, 90 F.2d 556, 559 (1st Cir. 1937).

243. This is not the case in Europe. See *Lauren Dress a Steal: French Court Rules He Copied A Design By Saint Laurent*, S.F. EXAM., May 19, 1994, at C5.

244. Apparently this was necessary to convince retailers that Guild members would not cut them off—or threaten to do so—opportunistically. On the internal administration of the Guild, see Weikart, *supra* note 242, at 251-53.

245. See *id.* at 252.

246. *Fashion Originators' Guild of America, Inc. v. FTC*, 312 U.S. 457, 463 n.3 (1941) (noting that the Guild had imposed a \$1,500 fine and had indicated that a \$5,000 fine would be imposed for future violations).

247. *Id.* at 462; *Filene's Sons*, 90 F.2d at 559.

248. *Fashion Originators' Guild*, 312 U.S. at 464 (upholding the FTC's "cease and desist" order to the Guild).

249. *Millinery Creator's Guild, Inc. v. FTC*, 312 U.S. 469, 472 (1941). This Guild was also dissolved by the FTC. *Id.*

aging from the antitrust perspective, put a ceiling on members' discounts to retailers.²⁵⁰ In 1941 the Supreme Court found that the Guild violated the Sherman Act by restricting competition in the women's garment industry.²⁵¹

Putting aside its anticompetitive practices, especially price fixing, the organization in *Fashion Originators' Guild* had encouraged originality, eliminated copied items from retail shelves, and raised the price to consumers. The only differences between the Guild and a formal IPR were (1) the fact that the Guild was based on an informal, inter-industry quasi-property right, rather than a formal statutory right; (2) the Guild required concerted action to achieve *any* appropriability, as opposed to the institutions described earlier, which were formed to *enhance* the appropriability of right holders; and (3) the Guild concentrated its enforcement efforts at the retail level by requiring retailers to sign contracts and by policing retailers, rather than targeting competing manufacturers.

Despite its similarity to formal IPR systems, the Guild was condemned out of hand by the Supreme Court.²⁵² Yet some recent theory on optimal property rights suggests that, at times, enforcement via "internal" governance can be more cost-effective than granting or clarifying formal property rights.²⁵³

Arguably, the Court should have bifurcated the issues in the *Fashion Originators' Guild* case, condemning practices such as price fixing, but remanding the case with instructions to find facts regarding the efficacy and economic impact of the basic anti-copying arrangement. The Court should have considered whether the Guild tended to enhance economic efficiency,²⁵⁴ and whether it did so at a lower cost than a formal property right in dress designs.²⁵⁵ Instead, the Court's

250. *Fashion Originators' Guild*, 312 U.S. at 463-65.

251. *Id.* at 467-68.

252. *See id.* at 464-65.

253. *See supra* notes 91-98 and accompanying text.

254. Recent commentary implies that it was efficient: "Guild demonstrates the potential of the market to produce alternatives to patents." Roger E. Meiners & Robert J. Staaf, *Patents, Copyrights, and Trademarks: Property or Monopoly?*, 13 HARV. J.L. & PUB. POL'Y 911, 929 (1990).

255. One recent article asserts that this was indeed the case. J. Gregory Sidak & David E. Kronemyer, *The "New Payola" and the American Record Industry: Transactions Costs and Precautionary Ignorance in Contracts for Illicit Services*, 10 HARV. J.L. & PUB. POL'Y 521, 555 n.131 (1987) ("In [*Fashion Originators' Guild*], a group of competitors organized a boycott of retailers who, through opportunistic behavior that was prohibitively costly for the defendants to monitor, facilitated the recurring misappropriation of the defendants' intellectual property.").

Sidak and Kronemyer do not go far enough, however. Monitoring is only part of the story. To advocate the Guild over a formal IPR granted by the state, we must assume that the combination of (1) enforcement at the retail level and (2) shared understandings about what qualifies as an "original design" would make the system cheaper to administer than a formal, state-run system that created the same level of reward, and hence incentives.

rejection not only killed an interesting experiment in alternative intellectual property systems, but it also sent a far-reaching signal that when these systems are based on informal property rights, they are void *per se*.²⁵⁶ While this conclusion may be defensible in certain cases, it might have been better to establish a "rule of reason" analysis for private intellectual property systems.²⁵⁷

While it is impossible to conduct a full rule of reason analysis on the Guild given the skewed (and aging) record in the case, the facts as presented do warrant a few observations. The Guild did not restrict entry in either manufacturing or retailing. It did not dominate the industry: non-members sold 62% of the dresses that sold for \$6.75 or more, and 40% of those that sold for \$10.75 or more. Presumably, non-members also sold the vast bulk of dresses selling for *less than* \$6.75. The Guild had sewn up (so to speak) exclusive outlets in the retail market, but this merely formalized the market segmentation that presumably existed to some degree already. Indeed, the same pattern of retail affiliation could easily be achieved by alternative, and arguably legal, vertical restraints. One might even characterize Guild membership as serving a "group trademark" or product quality-designation function, making the retail agreements look somewhat like franchise contracts. By the same token, individual trademarks (in the form of designer "labels") no doubt allowed at least well-established designers some added appropriability beyond that offered by Guild membership. To the same effect is the fact that lead-time advantages can also be effective as a way to appropriate returns in faddish industries. These features do

Retail enforcement was simple and clean compared, for example, to a copyright or patent infringement trial. The retailer who was discovered selling copies was simply cut off, subject to a rapid arbitration procedure, and possible arbitrated appeal, that used experts and industry insiders. As to the second feature, the high costs of patent prosecution and trademark registration proceedings speak for themselves. When these factors are combined, it is quite possible that the Guild provided a fair level of reward at less than the cost of a publicly-administered system.

256. Fashion piracy is still a major problem in the industry. Cf. Rocky Schmidt, Comment, *Designer Law: Fashioning a Remedy for Design Piracy*, 30 UCLA L. REV. 861, 861 (1983). See also Leslie J. Hagin, *A Comparative Analysis of Copyright Laws Applied to Fashion Works: Renewing the Proposal for Folding Fashion Works into the United States Copyright Regime*, 26 TEX. INT'L L.J. 341, 343 (1991):

Imitation may well be draining the lifeblood out of the United States apparel industry—destroying the incentive for the stylistic innovation that is the key to competitiveness in the international fashion industry. The United States may no longer be able to afford to adhere to the view that the unauthorized copying of original fashion works is good policy. The present domestic policy has led not only to theoretical anomalies, but to the loss of significant wealth as well.

The cost of producing a sample line could be as high as \$25,000. *Id.* at 346 n.25.

257. Today, a "rule of reason" is used to weigh the benefits of inter-brand competition against the costs of restrictions on intra-brand competition resulting from vertical restraints. Surely the vertical restraint aspects of the *Fashion Originators' Guild* case would be reviewed, and perhaps even decided, differently under current law. See, e.g., *Continental T.V., Inc. v. GTE Sylvania Inc.*, 433 U.S. 36 (1977).

not argue against the need for the Guild; indeed, the fact that firms invested in its creation suggests the opposite.

The Guild reflected a rare mixture of collective action and alternative appropriability mechanisms, which, taken together, obviated the need for formal property rights.²⁵⁸ The singularity of the conditions under which the Guild flourished refutes the argument that we should expect similar alliances to substitute for all formal intellectual property rights.

B. *The Hollywood Script Market*

Television and movie scripts are often written by freelancers not under contract with a studio or production company. These writers must submit the scripts if they are to be evaluated for purchase. Submission of scripts, however, is fraught with peril, because copyright protection does not extend to many basic elements of plot and character. Additionally, although numerous common law doctrines occasionally supply an effective theory of recovery for "idea theft," they are applied too unevenly to give much comfort to the professional scriptwriter.²⁵⁹ Consequently, it is difficult (and of course, expensive) to enforce rights in these aspects of a script, which creates a serious risk of misappropriation. Firms receiving unsolicited scripts face the opposite problem: the risk of a lawsuit every time a movie or TV show bears even a passing resemblance to an unsolicited script that was received sometime in the past.²⁶⁰

The Writer's Guild of America, West (WGA), developed a "Script Registry" to lower both these risks. For a fee, writers can deposit a copy of a script they are going to submit with the Registry, which date-

258. This is not to say that industry members did not try to obtain formal rights. Industry members pushed the so-called Vestal bill, described by Weikart, *supra* note 242, at 245-50, which would have established a limited property right over dress designs. But the bill was opposed by a host of industries—including manufacturers of automobiles, pottery, and glass products, as well as clothing retailers—which saw in it a threat from a new source of legal liability. This incidentally is an example of a widening set of interest groups vetoing the codification of an industry "deal," which this Article argues is a common phenomenon in intellectual property legislation.

259. For information on these theories of recovery, and their limitations, see MERGES ET AL., *supra* note 237, at ch. 6.

260. See Joy Horowitz, *Hollywood Law: Whose Idea Is It, Anyway?*, N.Y. TIMES, Mar. 15, 1992, § 2, at 1:

Although no one keeps track of how many plagiarism claims are filed each year, attorneys who have represented both plaintiffs and defendants in these suits say that the overwhelming majority are filed by opportunists trying to cash in on someone else's success. But those cases that seem to have foundation have put all the players in the movie and television industry on the defensive.

Ever since Orson Welles and his collaborator, Herman J. Mankiewicz, were sued for plagiarizing "Citizen Kane" from a book about William Randolph Hearst (R.K.O. settled for \$15,000 after a hung jury), motion pictures have inspired more plagiarism claims than all printed literature in the past, according to defense lawyers.

stamps it and stores it for five years. This system protects script writers when they submit the manuscript to others: the WGA will testify, if necessary, as to the date of submission, thereby preventing script theft.²⁶¹ The WGA receives 30,000 submissions annually and has 150,000 or more scripts on file at any time. The Registry also operates a proven arbitration service that resolves more than 300 cases each year; very few cases go beyond this tribunal to court.

The enhanced enforcement function of the Registry obviously broadens the market for scripts.²⁶² For certain scripts whose *ex ante* value is low, and which therefore could not justify the higher transaction costs that would attend an individually-negotiated submission contract, the Registry actually *creates* a market. The writers see the advantage of the system:

“You get a little sense of security that your ideas are somewhat protected,” said [one] writer who estimated this was his 20th trip to the registration office. “At least it provides a bit of ammunition in case questions of authorship come up.”

John Bowton . . . was at the guild’s offices to register an episode for Fox TV’s “The Simpsons” that he wrote in the hope of selling to the cartoon’s producers.

“I always feel that if I put the WGA [Registration] number on it, it’s like a little shield, like the sign of the cross keeping the vampire away This way, they know it’s on record and it’s the best thing to prove that you came up with the story.”²⁶³

In addition, it should be noted that scriptwriters are part of a fairly close-knit industry with many repeat-play features. These factors make informal dispute resolution, and the Registry institution itself, run more smoothly.²⁶⁴ Indeed, WGA membership requirements are structured so

261. Writers Guild of America, West, Creative Rights for Writers of Film and Television, May 1992, at 14-15.

262. Interestingly, the Patent Office can be said to serve a similar function. By putting its imprimatur on an invention, the office certifies that the patent is at least apparently new and nonobvious, and that the description is true (since there are penalties for lying about the invention to the office). Hence the Office serves a “bonding” function in addition to its role of protecting a prospective licensor from the bite of Arrow’s information paradox. See Kenneth Arrow, *Invention, in THE RATE AND DIRECTION OF TECHNICAL CHANGE* (NBER) (1962).

263. Cynthia Craft, *Hollywood’s Storehouse of Scripts, Ideas*, L.A. TIMES, Mar. 18, 1992, at F3.

264. Horowitz, *supra* note 260, at 1 (“Says one attorney from O’Melveny & Meyers, ‘Frankly, [these cases often settle confidentially] because everyone works with everyone else. It’s almost like mediating a family dispute.’”). See generally ELLICKSON, *supra* note 69 (on norms in close-knit groups).

An interesting analogue can be found in the toy industry which, like the TV and film industries, relies on independent “concept creators” for a fair number of new products. RICHARD C. LEVY & RONALD O. WEINGARTNER, *INSIDE SANTA’S WORKSHOP* 176-81 (1990). As with scriptwriters, at least some toy creators appear to prefer being freelancers. Toy companies have come to depend on trusted “pros,” or repeat players, who submit many product ideas over a long period of time. Note that trusted pros operate without benefit of a registry. This may suggest (1) that the value of an

as to screen out non-repeat players. To join, a writer must either be employed by a film or television studio that subscribes to the WGA's standard agreement, or have sold at least one script of substantial value.²⁶⁵ Many producers and studios go further, requiring that all scripts be submitted through literary agents who are themselves WGA members.²⁶⁶ Another telltale sign that script writers form a close-knit community is that informal sanctions—of the form “you’ll never eat lunch in this town again”—are quite effective. Finally, the widespread acceptance of expert arbitration panels in the industry bolsters the impression of a system of shared information and norms.²⁶⁷

One alternative to the script registry, “vertical integration” in the form of hiring script writers as employees, is hardly a perfect substitute. Many writers surely produce better work as freelancers, a situation that provides them with complete freedom to shape their work environment and creative process.²⁶⁸ It is also no doubt very difficult to pre-identify potentially productive script writers, manage them, and monitor their output. Finally, the “personal service” contracts necessary to bind employee-writers would face serious enforcement problems in the courts. If an employee scriptwriter thought she had hit upon a “blockbuster,” she would almost surely quit the company and claim to have developed the idea on her own, rather than allow the employer to reap the lion's share of profits. For all these reasons the script registry may be said to add value by conserving on transaction costs.

C. *Weak (or Absent) Property Rights and the New Institutionalism*

The institutions we have just examined resemble the medieval trading guilds discussed in Part I. Despite the complexity of modern

individual toy idea submission is lower than that of a script submission, making the extra cost of a registry (i.e., extra enforcement expenditure) not worthwhile in the toy industry; and/or (2) that it is easier to determine when a toy concept has been copied (enforcement costs again); and/or (3) that there are fewer toy companies and perhaps fewer toy “pros” than on the entertainment industry side, making it easier for all concerned to exchange information about violations.

265. Letter from Georgia J. Mau, Employment Access Division, Writers Guild of America, West (Dec. 14, 1994) (on file with author).

266. See Lawrence G. DiTillio, *Shattered Myths: A Sobering Lump of Coal from Our Columnist*, WRITER'S DIGEST, Dec. 1994, at 45 (describing script submission policies for all television shows, listed in the Writers Guild Journal: “Out of 95 shows of the current list, 19 will accept submissions from agents only”).

267. Besides idea submission disputes, the WGA also employs arbitration to resolve disputes about “credits,” i.e., recognition for the contributions of individual writers to an overall script. Credit arbitration procedures were reviewed in *Marino v. Writers Guild of America, East, Inc.*, 992 F.2d 1480 (9th Cir. 1993), cert. denied, 114 S. Ct. 472 (1994).

268. See generally Merges, *supra* note 97 (describing impact of intellectual property rights on the choice of organizational forms, especially their effect on decentralized production of information).

industry, the same basic driving forces are at work in stimulating creative responses to high transaction costs.

Both the Maghribi Guild and the Fashion Originators' Guild were organized to overcome opportunism and high enforcement costs. Because both institutions were organized to reduce transaction costs, we should not be surprised to discover that the two organizations share many common features in their internal logic and operation. Most importantly, both employed *group* boycotts to enforce their rules. Collective enforcement was necessary in the context of Medieval trade where "the maximum punishment imposed by an individual merchant is not sufficient to enable the agent to commit himself . . ."²⁶⁹

It is not incidental that informal norms, and the patent pools whose operation they emulate, function best where they are run by a close-knit group of experts with shared understandings of the technology, industry, and entitlements structure. The same story can be told about the Fashion Guild: withholding from a retailer an individual line of dresses, sold by a single manufacturer, was an insufficient sanction because the market provided plenty of good substitutes. An individual line was unlikely to be so profitable that a retailer would agree not to sell copies. But the *collective* threat—to cut off access to the entire "high end" of the dress market—was a far greater sanction. The threat of exclusion from a significant portion of a substantial market segment would increase the likelihood of compliance. The Fashion Guild was apparently successful in resolving this problem: witness that 12,000 retailers had joined the Fashion Guild by the mid-1930s.

There are other similarities between the trading and fashion guilds: (1) a private code of conduct, with informal but escalating sanctions;²⁷⁰ (2) initial operation within a relatively small social unit,²⁷¹ and

269. Greif, *Enforceability and Institutions*, *supra* note 87, at 530.

270. See *id.* at 529 (use of informal "reputational" enforcement mechanism instead of formal legal system); Weikart, *supra* note 242, at 252:

The Guild also provided a "piracy committee" at which the alleged copy was "put on trial" and at which its manufacturer was given a hearing on the issue as to whether the dress was in fact a copy. From this decision, an appeal could be had to a mediation board composed of one man chosen by the copy-manufacturer, one by the complaining manufacturer, and a third chosen by these two.

See also *id.* (discussion of dress registration bureau for resolving disputes among Guild members); Milgrom et al., *supra* note 86, at 18-20 (merchant courts of the Champagne trading fairs of the 12th and 13th centuries can be analyzed as an institution that supported impersonal exchange via information gathering, incentives to honor agreements, reporting of disputes, and incentives for adhering to judgments). The Medieval merchant courts can be seen as similar to the internal "judicial" system of the Fashion Guild.

271. See Greif, *Enforceability and Institutions*, *supra* note 86, at 539 ("The Maghribi traders' social structure provided them with the initial information-transmission mechanism required for the emergence of an economic institution . . ."). Recall that the Fashion Guild began with only fifteen members.

(3) the ability to enforce the code of conduct effectively due to tractable monitoring conditions and shared access to information.²⁷²

Finally, monopoly rents may have figured significantly in the Maghribi trade guilds, serving as an incentive for members to remain in the coalition. These rents made credible the coalition's promises to stick together in protecting foreign merchants against expropriation by local political rulers.²⁷³

The above comparison of these two institutions—widely separated in time and space—demonstrates that there are common dynamics that encourage the formation and successful operation of institutions. Institutions for IPR transactions are simply one modern variant on a very old theme.

Recognizing the relationship of IPR institutions to a whole family of institutions, we can draw on Robert Cooter's theory that describes when the state should codify or ratify norms that have emerged organically from repeated interactions in a commercial community:

The role of the state in a decentralized legal system is to elevate appropriate social norms to the level of law. Elevating a social norm to the level of law involves issuing an authoritative statement of the norm and backing it with the state's coercive power. The "adjudication of social norms" describes the process by which officials decide which social norms to elevate to the level of law.

I envision three steps in adjudicating business norms. First, lawmakers should identify the actual norms that have arisen in business communities. A norm exists in a community when there is a consensus about what its members ought to do Second, lawmakers should identify the incentive structures that produced the norms. Identifying the incentive structure requires constructing a model that characterizes the norm as an equilibrium in a game and testing the model against the facts. Third, the efficiency of the incentive structure should be evaluated using analytical tools from economics. When the incentive structure is efficient, the social norm imposes an obligation to follow a cooperative strategy that results in repeated transactions. Furthermore, the payoff sets are convex, and the effects of the obligatory strategy do not spill over beyond the community in

272. *See id.* at 529 ("A Maghribi merchant was associated with many Maghribi traders residing in different trade centers, and it was customary to reciprocate in the supply of trade-related information that was so crucial to business success."); Weikart, *supra* note 242, at 252 ("The Guild maintained a detective system which kept close watch of retail sales, discovered copies, and notified the member-retailers.")

273. Greif et al., *supra* note 87, at 749.

which the norm arose. Those business norms that arise from an efficient incentive structure should be enforced by the state.²⁷⁴

Space limitations prevent full application of Cooter's framework to either of the private intellectual property systems studied here, but the following basic observations are warranted. First, the Fashion Guild and Writer's Guild both exhibit norms as defined by Cooter. Second, the incentive structure that produced the norms was one wherein firms saw it in their self-interest to impose collectively-enforced anti-piracy norms.²⁷⁵

D. The Limits of Private IPR Systems: A Critique of Professor (now Justice) Breyer's Critique of Copyright

The foregoing investigation of private intellectual property systems teaches some powerful lessons, but we must caution against overeager extrapolation. The requisite preconditions are simply too rare. If we systematically fail to grant initial rights, we cannot rely on "spontaneous order" to bail us out. More often than not, efficiency-enhancing transactions will never take place.

This conclusion is at odds with the forceful statements made by Professor (now Justice) Breyer in his 1970 challenge to the existence of copyright law.²⁷⁶ Breyer argued that, at least for certain works traditionally protected by copyright, collective action by buyers might substitute for copyright protection. He used the example of book clubs. Clubs, he argued, might arise to sponsor authors who would write special editions for the members of the clubs.²⁷⁷ Although Breyer appeared to recognize collective action problems facing these members, he swept them aside with a reference to existing book clubs, which he said pro-

274. Robert D. Cooter, *Structural Adjudication and the New Law Merchant: A Model of Decentralized Law*, 14 INT'L REV. L. & ECON. 215, 226 (1994).

275. A game theory model could easily be constructed to model the situations faced by the participants to show that widespread adherence to the guilds' norms (i.e., a "cooperative strategy") produced Pareto-superior results as compared to the practice of piracy (i.e., a "non-cooperative" strategy).

Problems might arise in determining the convexity of the "payoff set" for each guild, and in arguing that there were no spillover effects. For example, in the case of the Fashion Guild, there clearly were such effects, in the form of higher average prices for registered designs. It would require only a modest extension of Cooter's approach, however, to argue that without the added appropriability of Fashion Guild membership, fewer new dress designs would have entered the market—and hence that cost increases were offset by incentive effects. This stems from the fact that, as in all public goods situations, IPRs present a stark choice: between the negative externality of supra-competitive consumer prices if we grant an IPR and the positive (uncompensated) externality of free information if we don't, with the predicted effect of deterring investments in such information in the future.

276. See Stephen Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 HARV. L. REV. 281 (1970).

277. *Id.* at 302-06.

vide a template for such institutions. But existing book clubs serve a very different function from sponsorship; they represent concerted buying power for books *already in existence* and lower the transaction costs of early sales by bundling buyers together. They are quite clearly not a substitute for copyright, and not even for the institution of the publishing firm, which currently performs much of the author-audience matchmaking with which Breyer was concerned. Indeed, the private intellectual property systems discussed above reveal the freakish conditions under which private collective action can effectively substitute for formal property rights. In those cases, as we have seen, a *limited* number of repeat-play actors recognize a limited bundle of informal property rights either in input markets (such as the market for scripts administered by the Writer's Guild) or at the "horizontal" level of producer firms, where small numbers and a common information base facilitate repeat-play among mutually-recognized experts (such as the case of fashion guilds in the 1930s). Most books sold to consumers simply do not fit this model.²⁷⁸

Rejecting Breyer's challenge occasions a return to an earlier point. Recall that property rights create transaction costs *in input markets* that must be overcome, often through formation of the sorts of institutions discussed in this Article. Yet these rights do more: they prevent widespread copying in the *consumer* market. Although they create transaction costs at the input level, they are often essential for appropriability by the IPR holder who wishes to sell to consumers. Only rarely will the owner of an IPR be able to appropriate sufficient returns, absent the grant of some sort of formal property right by the state, merely by participating in an institutional arrangement at the supplier (or input) level. Wendy Gordon has remarked on the dual nature of transaction costs in IPR markets, and I have commented on the basic logic of property rights as "off the rack" enforcement devices, good against third parties not in privity with the right holder.²⁷⁹ This attention to the canonical function of formal property rights reminds us that the sort of horizontal

278. Breyer's proposal in some ways would resuscitate the past practice of "arts patrons," who paid for fine art works—including books—with direct authors' commissions. Unless book clubs could be expected to interfere less in the creative process than arts patrons were known to, they would entail the same costs in lost creative freedom. See, e.g., WILLIAM D. GRAMPP, *PRICING THE PRICELESS: ART, ARTISTS, AND ECONOMICS* 40-46 (1989) (describing the mercantile, and definitely hierarchical, relations between patron and artist). Cf. Merges, *supra* note 97, at 1578-81 (discussing the advantages of dis-integrated production of creative works, which is obviously enhanced by state-granted property rights).

279. See Wendy J. Gordon, *Asymmetric Market Failure and Prisoner's Dilemma in Intellectual Property*, 17 U. DAYTON L. REV. 853, 853-59 (1992) (attempting to model emergence of intellectual property where costly market failures can be remedied with state-granted rights that are tradeable in markets); Robert P. Merges, *Contracts, Property Rights, and Enforcement Costs: Notes from the Intellectual Property Frontier* (1995) (working paper on file with author).

contracting among firms in an industry—often over inputs—is but one of the transaction types typically involving IPRs. Producer-consumer transactions are at least equally significant.

Ultimately, then, the script registry and fashion guild serve to highlight the uneasiness of the general case *against* copyright. Only in exceptional cases do we expect to see the realization of Breyer's vision of extensive *ex ante* contracting as a substitute for state-granted property rights. As argued earlier, when this vision is realized, and when it appears to be efficient in light of industry conditions, we ought not to unravel the contractual scheme on antitrust grounds. For the reasons given here, however, it appears unlikely that there will be too many such schemes to unravel in the first place.

IV

IMPLICATIONS FOR AN EMERGING MARKET: MULTIMEDIA

The evolving multimedia industry, with its voracious IPR appetite and few mechanisms to ease transaction costs, provides an excellent opportunity to apply the history and theories of private intellectual exchange institutions in a new and interesting context.

A. *The Problems of the Multimedia Industry*

Affordable home computers are now powerful enough to run complex programs interspersing text, music, graphics, images, and even video "film clips." These new "multimedia" programs rely heavily on inputs usually covered by IPRs, often copyrights. IPR-related transaction costs consume an inordinate share of the resources of the young multimedia industry.²⁸⁰ Anecdotal evidence is starting to pile up about

280. See, e.g., Pamela S. Helyar & Gregory M. Doudnikoff, *Walking the Labyrinth of Multimedia Law*, 41 TECHNICAL COMM. 662, 663-64 (1994):

[T]he evolution of multimedia technology has been fast and furious. So while we have the technical ability to draw easily from the entertainment and computer industries in the development of multimedia products, the cumbersomeness of licensing procedures and the costs of licenses have often made it unfeasible for us to license elements from them.

See also Fred Greguras et al., *Multimedia and the Superhighway: Rapid Acceleration or Foot on the Brake?*, 11 COMPUTER L. 12 (1994) ("In many instances, pre-existing works are not used in such content because obtaining rights is costly and time-consuming."). To some extent, licensing difficulties also reflect uncertainty over what forms the technology will take in the future, and hence what rights must be licensed. See Paul Karon, *Electronic Publishing Faces Legal Traps Over Copyrights*, INFOWORLD, Mar. 9, 1992, at S70:

Publishers of electronic books, photographs and art collections are finding that it isn't so easy to get licenses to copyrighted material from the authors and artists who own them. . . .

...
 "[Copyright owners] don't want to sell their rights down the river, and they're not sure what they're selling," says [an attorney in a law firm] handling many information-transfer clients.

marketable products that are simply too expensive to put together.²⁸¹ IPRs are thus a crucial roadblock around which the industry must navigate to press ahead.²⁸² The industry awaits the advent of mechanisms to lower transaction costs, such as standardized contracting forms²⁸³ and

See also Experts Exploring Authoring Rights for Networked Content, MULTIMEDIA WEEK, Oct. 18, 1993, at 1 [hereinafter *Authoring Rights*] ("Many observers believe that interactive network services, particularly for consumers, will grow dramatically in the next few years.").

281. Barbara Zimmerman, *Piecing Together a Puzzle: Rights Clearances for Multimedia*, CD-ROM PROF., Oct. 1, 1995, at 30, 34-35:

The rights clearance process required to acquire the hundreds of copyrighted materials used in IBM's giant multimedia project, Columbus: Discovery, Encounter and Beyond, proved a nightmarish undertaking. For example, IBM needed to secure three separate permissions—for printing onscreen, inclusion in a companion book, and having a narrator read aloud—for a three-page selection about Hernan Cortes. The original book was out-of-print, and the identities of the owners of the copyright were uncertain. Obtaining clearance to use this material required locating and securing permission from seven different rights owners—four in the United States and three in Europe—and seven separate fees. The seven separate negotiations also required 50 costly hours of legal rights counsel.

Arthur S. Hayes, *Emerging Multimedia Products Spur Copyright Worries*, WALL ST. J., Jan. 27, 1992, at B2:

Blake Lewin, licensing director for Warner New Media, a Time Warner unit, says lack of cooperation from copyright holders has already forced him to change the scope of one production, "Loud Guitars," a history of the electric guitar. The project ends with Jimi Hendrix, the 1960s guitarist, because present-day rocker, Eddie Van Halen, refused to license his music and image, Mr. Lewin says.

Sean Silverthorne, *High Anxiety: Software Companies' Fight for Intellectual Property Rights*, PC WEEK, June 28, 1993, at S-2:

Acquiring rights for multimedia is rife with the potential for . . . disappointments. Because it borrows from every other medium, developers find themselves negotiating for material from a panoply of sources—book publishers, music studios, music writers, radio stations, TV networks, producers and photographers. What makes it even more Byzantine is that every one of its segments has its own business practices, traditions and fee structures.

[R]ights can be scattered far and wide. Say you want to include a 60-second clip of Neil Simon's appearance on "The Tonight Show" in your multimedia title. First call is to Carson's agent. Then to Simon's. Then you've got to get to Ed McMahan's representative, the director's guild, the writer's guild, every member of the band and maybe other guests. "You probably won't get all those permissions," says Barbara Zimmerman of New York-based BZ/Rights and Permissions, Inc., "but if you did you would be looking at tens of thousands of dollars in fees—for one minute."

See also 1994 Spring-Stated Meeting, Concurrent Session (#3)—Friday, April 22, AIPLA BULL., May-June 1994 [hereinafter *Ossola, Multimedia Comments*], at 445, 451-52 (statement of Charles Ossola); *Contemplating an Interactive Cable Future—So Many Questions*, MULTIMEDIA WEEK, Oct. 25, 1993, at 1; Karon, *supra* note 280, at S70; Don Steinberg, *Hey! We're Being Sued for Copyright Infringement*, INFOWORLD, Mar. 14, 1994, at 54 (all providing additional instances of the difficulty of obtaining multiple permissions).

282. *See, e.g.*, Karon, *supra* note 280, at S70 ("Most [CD ROM publishers] I talk to are very interested in having the industry get together to make some practical [licensing] standards," [Jane] Kinne [of Comstock, a New York stock photography agency] says. . . . "They're not interested in investing a lot of money in a product that is going to be shot down a couple of years later in a lawsuit.").

283. *See, e.g.*, Deirdre Carmody, *Writers Fight for Electronic Rights*, N.Y. TIMES, Nov. 7, 1994, at B20 (discussing moves by the National Writers Union to establish a standard journalism contract and an electronic rights guidelines book).

collective rights organizations like ASCAP.²⁸⁴ The industry is an ideal testing ground for many of the observations and recommendations put forth in this Article.

Multimedia is a fascinating new industry in part because its products can be delivered electronically. Already extensive libraries of graphics, text, and music are available over the Internet, and more is flooding into the electronic marketplace every hour.²⁸⁵ In fact, the first cases testing the limits of intellectual property for multimedia have arisen in this context. *Playboy* won an injunction and damages against an Internet bulletin board operator who facilitated "downloading" of copies of the magazine's copyrighted pictures.²⁸⁶ Freelance authors—acting under the auspices of the National Writers Union—have joined in a suit against magazine publishers who they say are violating the authors' copyrights by selling electronic versions of the authors' work to electronic database and CD-ROM companies.²⁸⁷ A similar suit was filed by music publishers, charging infringement by virtue of electronic music bulletin boards.²⁸⁸

As with the first music cases in the early days of radio,²⁸⁹ the injunction in the *Playboy* case has introduced a new era of transactional complexity to industry members and observers. According to Robin Davis Miller, executive director of the New York-based Authors Guild, which represents 6,500 writers worldwide, if courts strictly enforce copyrights in the multimedia setting "a lot of projects will grind to a halt as publishers try to figure out what . . . rights they need to obtain."²⁹⁰

284. See, e.g., Helyar & Doudnikoff, *supra* note 280, at 670 (discussing the possibility of developing electronic "finger prints" to provide information regarding the rights holder and licensing procedures); William A. Tanenbaum, *Current Multimedia Patent, Copyright, Work Made for Hire, and Rights Acquisition Issues*, in MULTIMEDIA AND THE LAW (PLI 1994).

285. See Greguras et al., *supra* note 280, at 12.

286. *Playboy Enterprises, Inc. v. Frena*, 839 F. Supp. 1552 (1993); Josh Hyatt, *Highway Robbery: The Information Superhighway Has Not Yet Reached Homes, But the Legal Issues it Raises are Already Generating Traffic in the Courts*, BOSTON GLOBE, Jan. 2, 1994, at 29 (reporting decision in *Playboy* case).

287. Rosalind Resnick, *Writers, Data Bases Do Battle*, NAT'L L.J., Mar. 7, 1994, at 1 (describing the complaint initiating the case of *Tasini v. New York Times*, No. 93-8678 (S.D.N.Y.), with additional defendants *Newsday Inc.*; *Mead Data Central Corp.*, owner of *Nexis*; *The Time Inc. Magazine Co.*; and *University Microfilms International*); *Writers Sue for Online Copyright*, NEWSBYTES NEWS NETWORK, Dec. 20, 1993 (quoting plaintiff John Tasini speaking out against illegal profiteering by publishers [of electronic databases] who are "making millions off unauthorized re-use).

288. Hyatt, *supra* note 286, at 35 (discussing suit by Frank Music Corp., filed on behalf of a class of music publishers against CompuServe, charging infringement by making available on-line digitized music recordings [MIDI] for customers to download).

289. See *supra* notes 110-122 and accompanying text.

290. Resnick, *supra* note 287, at 28 (quoting Robin Davis Miller) (omission in original).

B. What Should Be Done in the Multimedia Context?

In this Section, I apply some of the lessons of collective rights organizations to determine whether these problems would best be solved by a statutory solution, in the form of compulsory licensing, or by private institutions that might emerge if a compulsory license is avoided.

1. Costs and Benefits of a Statutory Licensing Scheme

Predictably, there are already calls for a compulsory licensing regime to end the transactional turmoil.²⁹¹ Most notably, American copyright expert Professor Dennis Karjala of Arizona State University School of Law calls for a compulsory license for multimedia works.²⁹² Karjala says that a statutory license would "counterbalance" the extension of rights into this important new economic domain.²⁹³ Other commentators have mirrored this idea, in the context of a discussion of proposals to centralize licensing in Japan to facilitate development of the multimedia industry.²⁹⁴

This Article has been critical of compulsory license schemes for their lack of flexibility and for their susceptibility to political lobbying.²⁹⁵ Yet, there would be transaction cost benefits to a compulsory license for any copyrighted material integrated into a multimedia product. Such a license would obviously eliminate many of the costs that currently plague the multimedia industry. As one expert on rights clearance puts it,

On the multimedia side, you've got potentially thousands of pieces of content, and I think that's one of the biggest hurdles this market has to face. How do they get [right-related] research

291. Jerome H. Reichman, *Legal Hybrids Between the Patent and Copyright Paradigms*, 94 COLUM. L. REV. 2432, 2504 (1995) (calling for creation of "a default liability regime" for many classes of intellectual property rights, including those that apply to multimedia).

292. See Dennis Karjala, Comment on the Institute of Intellectual Property Report Exposure '94, (Japan) Institute of Intellectual Property, International Intellectual Property Symposium: A Proposal of the New Rule on Intellectual Property for Multimedia, English Text, Apr. 7, 1994, at 18 [hereinafter *New Rule Proposal*] (copy on file with author).

293. *Id.* at 19. Karjala explains:

It will not do simply to expand rights and remedies of authors further simply on the ground that digital technology otherwise inhibits effective enforcement. Any expansion of rights and remedies of right holders must be counterbalanced by some public benefit through, for example, compulsory licensing or a shorter term of protection . . .

Id.

294. See Thomas Dreier in *New Rule Proposal*, *supra* note 292, at 23, 27 (speaking of various potential "models" for compensating multimedia work creators: "Model number eight would provide for a change in copyright legislation to the effect that the inclusion of protected material in a multimedia application no longer be subject to authorization, but only gives rise to a claim for remuneration"). Cf. Pamela Samuelson et al., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308 (1994).

295. Since the compulsory licensing discussions have so far centered on copyright, we will limit our attention accordingly.

done on thousands of pieces of content? It's not just the logistics and the timing of it. It's the pure economics of it. . . .

. . . [For each piece of content,] [y]ou need to go talk to that rights owner. You need to negotiate, and you need to pay the license fees. And probably at the end of that process, you're in a negative position in terms of cash.²⁹⁶

This commentator's complaints reflect one of the classic rationales for a compulsory license: immediate short-term savings on transaction costs.

A compulsory licensing scheme that included a fixed pricing menu would also resolve the current uncertainty over how to price multimedia "content."²⁹⁷ The statute would establish the rate, once and for all; then it would be a dead issue, saving an appreciable amount of money that is now and would otherwise continue to be spent negotiating prices.

In addition, if the multimedia scheme were accompanied by a built-in administrative apparatus, similar to statutory performing rights societies in Europe,²⁹⁸ it would also save on initial administrative set-up costs. This once again means immediate transaction-cost savings; the costs of identifying owners,²⁹⁹ accounting for rights, establishing membership and voting rules, deciding on enforcement strategies such as test litigation, and determining formulas for dispersing the royalty revenue generated by licenses to individual members would all be lowered. Although it is difficult to quantify these costs, they definitely add up to a substantial figure.

Japanese officials, evidently impressed with the high cost of conducting IPR transactions in the multimedia context, have announced plans to create a central clearinghouse to serve this new industry. While the contours of the organization under discussion are not yet clear,

296. See 1994 Spring-States Meeting, Concurrent Session (#3)—Friday, April 22, AIPLA BULL., May-June 1994, at 445, 459 [hereinafter Gast, Multimedia Comments] (statement of Jay Gast, Vice President, Copyright Research, Thomson & Thomson, Inc.).

297. See, e.g., *Experts Exploring Authoring Rights*, supra note 280, at 1 (quoting industry experts bemoaning lack of agreement on what digital rights are worth).

298. These are organizations that parallel ASCAP and BMI, but are established by statute in many European countries. See SINACORE-GUINN, supra note 99.

299. This cost can be substantial. See Fran Smallson, *Searching for the Right Stuff*, LEGAL TIMES, May 15, 1995, at 55:

The growth of multimedia, touted as the single most promising technological innovation in decades for fields as varied as entertainment, health care, and the automotive industry, has one major obstacle: the maze involved in obtaining rights to use content supplied by others. The most difficult questions in that maze are not just *how* to license the content once it has been identified, but also *which* content needs to be licensed and *where* one will find the potential licensor.

The closest analogy to this process is doing a title search when purchasing real property. Unlike the owners in a real-property search, however, the owners of the pre-existing works needed for a multimedia work are often numerous, difficult to identify, and hard to locate.

some people think that it ought to entail a compulsory license.³⁰⁰ A compulsory licensing scheme represents a real shortcut: it eliminates the need for private institution-building—a costly and time-consuming process. Especially if officials are concerned with falling behind other countries in the race to lead the multimedia industry, such a proposal would be tempting.³⁰¹

However, this temptation might be worth avoiding. In the long-term, the industry and its consumers might be better off if legislatures held off instituting a compulsory license scheme and allowed space for the formation of private CROs that would perform similar functions in a superior manner. We must therefore assess the likelihood of these private CROs developing.

2. *Will Private Institutions Develop in the Multimedia Context?*

There are signs that private institutions are beginning to develop in the multimedia industry. Because the industry is so young, a number of competing proposals currently vie for attention. Some call on existing institutions to branch out into transactions for multimedia products. For example, the Copyright Clearance Center, a moderately successful private clearinghouse for photocopying permissions and royalties, recently announced a plan to set up an affiliated multimedia division.³⁰² Another established member of the copyright clearance community, the Harry Fox Agency, has moved in the same direction.³⁰³ While it remains to be seen whether these institutions will adapt successfully to the demands of the new media, ASCAP's experience shows that it is possible to apply existing institutional know-how to a new set of transactional problems.

Others have called for a new institution—a centralized clearinghouse, explicitly modeled on ASCAP, to handle the load.³⁰⁴ There even appear to be some candidates vying for the role of unified, centralized

300. See *supra* notes 292-294 and accompanying text. Cf. *U.S. Concern on Japan Copyright Issues Likely to Shift to Multimedia Products*, INT'L BUS. & FIN. DAILY (BNA), Feb. 2, 1995, at 1:

Japan has floated proposals for a giant copyright licensing bank that would reduce production costs for multimedia products such as CD-ROMs In the U.S. view, this approach is fine if Japan licenses collectively However U.S. officials [said they would voice] objections [over] any multi-media authorizing library [that included] government controls over prices or compulsory licenses

301. See *id.*

302. See Tom Steinart-Threlkeld, *Copyright Protection Plan for Digital Data*, INTER@CTIVE WEEK, Mar. 13, 1995, at 12 (announcing agreement between Copyright Clearance Center and Folio Corp. to create software-based clearance system linking Folio's digital licensing software with the Clearance Center's royalty accounting expertise).

303. Interview with Peter Boyle, Chief Economist, ASCAP (Apr. 3, 1995).

304. Steinart-Threlkeld, *supra* note 302, at 17; Karon, *supra* note 280, at S70 ("[a group of] photographers are trying to flesh out a new set of copyright arrangements for photographs [T]his sort of licensing has been going on in the music industry for years, managed by a company [sic] known as ASCAP . . .").

clearinghouse. Right now, however, no single organization has emerged as the clear leader. And there is of course every reason to believe that multiple, competitive institutions can and will survive.

At the same time, some new clearinghouse firms have recently been founded to clear rights for particular types of content. A group of professional photographers, for instance, have begun something called the Media Photographers Copyright Agency ("Photographers Agency").³⁰⁵ An industry insider describes the Photographers Agency as follows:

In the photography field there has been formed a subsidiary of a trade association, and the purpose of the subsidiary is to facilitate the electronic licensing of rights and photographs. And the basic business idea is to have 5,000 of the world's best photographers with millions of images of the world's best photography accessible through a single transaction through this subsidiary.³⁰⁶

The development of the Photographers Agency resembles the histories of other IPR exchange institutions. Born of the need to lower transaction costs in the market for high-quality photos, the Photographers Agency will apparently offer licensees an attractive package of photos at rates determined internally through some decision-making/governance structure.³⁰⁷ This structure contrasts with the traditional "stock" photo agency, which requires a large share—typically 50 to 60%—of any royalties generated by a participating photographer's photos. Although there are many such agencies, which typically hold non-exclusive, limited-term rights to participants' photos, freelance photographers have apparently voiced dissatisfaction with many of them.³⁰⁸

The Photographers Agency described above will allow participation by members and will encourage members to share expertise in setting individual royalty rates.³⁰⁹ The agency may also at some point bundle groups of photos for sale at special prices. Already the collective clout of the members has drawn the Photographers Agency into a business alliance with a well-known firm specializing in digital imaging technol-

305. The Agency is a function of the American Society of Media Photographers. See Ossala Multimedia Comments, *supra* note 281, at 453-54.

306. *Id.* at 453.

307. Image Databases; Commercial and Online Stock Photo and Multimedia Services: Seybold Special Report, Seybold San Francisco '94, Part 2: Product Announcement, The Seybold Report on Publishing Systems, Oct.

308. See 1993 PHOTOGRAPHERS MARKET 501, 503 (1992):

Several stock agencies aren't happy with the concept [of the Photographers Agency] because they fear photographers will leave stock houses to join the collective. [Richard Weisgrau, [President of the Photographers Agency] hopes the idea will make some sloppy stock agencies clean up their acts in order to keep photographers.

See also *id.* at 502 (listing "Ethical Guidelines" for stock agencies, promulgated by trade association Picture Agency Council of America).

309. A[GT and the Photographers Agency] to Provide the First Fully Digital Stock Agency, Business Wire, Sept.

ogy.³¹⁰ In addition, just as with the Writer's Guild, the Photographers Agency will offer members a collective enforcement mechanism that spreads the initial costs of enforcing rights in the new multimedia environment, standardizes licensing practices, and achieves economies of scale in licensing and enforcement.³¹¹ This is of course reminiscent of the ASCAP story, recounted earlier in Part II.

Similar single-content clearinghouses are either operating now or are in the planning stages in the following fields: text;³¹² film (including film clips, actors' releases, etc.);³¹³ music for films, television, and multimedia;³¹⁴ and titles, designs, and characters.³¹⁵

The various multimedia institutions now beginning to flourish provide contemporary evidence that in a property-rights world, high transaction costs push parties towards private IPR exchange institutions. The multimedia story so far has a familiar ring to it: the early cases granting injunctions to protect property rights, the resulting transactional overload, and the evolution of institutions in response. We have seen these elements at work in recounting the histories of other IPR institutions. But there is something quite unfamiliar as well, something that gives the new multimedia exchange mechanisms an extra dimension compared to those of the past: rapid computerized exchange capabilities.

a. Impact of Exchange Technologies on IPR Institutions

The institutional response in multimedia has been much quicker than that in former times, primarily because of improvements in the

310. Bob Weibel, *Photo CD Finds Its Niche*, COMPUTER PICTURES, Nov. 1994, at 16 (describing role of Applied Graphics Technology, Inc., "the largest provider of prepress services to the nation's major publishers," in the Photographers Agency).

311. Photographers Agency Press Release, *supra* note 309:

The MP©A [i.e., Photographers Agency], based in Princeton Junction, New Jersey, is a licensing agency formed and owned by the ASMP to meet the evolving needs of print and electronic publishers, and to protect the copyrights of its members. To address the impact that new media technologies are having on the market for images and the terms of transactions, the MP©A is establishing new trade practices and policies for licensing the rights of its members' photography.

312. See Jenna Schnuer, *New Service Aims to Simplify E-rights Process*, FOLIO: THE MAGAZINE FOR MAGAZINE MANAGEMENT, July 1, 1995, at 24 (describing "Authors Registry," newly-announced service of the Authors Guild in New York City):

The Authors Registry offers two main services: a database of rights holders (along with contact addresses), and a compensation agency that will take a bulk payment from a content provider and divide it up to pay the individual rights holders. If the Authors Registry works as promised, it will help solve some of the bookkeeping problems that have been points of contention between content providers and publishers on the one side, and writers groups on the other.

313. Organizations include: UCLA Film and Television Archive, USC's "Integrated Studio Project," and the American Film Institute. See Fran Smallson, *Soliciting from a Spectrum of Sources*, RECORDER, March 6, 1995, Intellectual Property Supplement at 28, 31.

314. Organizations include Bogner Entertainment, Inc., of Los Angeles; TRF Music, Inc., of Chestnut Ridge, N.Y.; and of course ASCAP, BMI, and SESAC. *Id.*

315. A firm called Thompson & Thompson has long operated a service for these purposes. *Id.*

technology of transacting. Because the intellectual property inputs in this industry come in electronic form, and because hardware and software are so sophisticated, electronic transaction systems are quickly emerging to augment the functioning of exchange institutions.³¹⁶ The relationship between these organizations and the new technologies they employ makes for an interesting new twist on the old story of institutional response and adjustment.

For the most part, exchange technologies are seen as an adjunct to exchange institutions. Digital clearinghouses are pitched as the "user interface" for the firm or organization that assembles the rights and facilitates exchanges.³¹⁷ The promise of rapid and efficient exchange technologies dims further whatever enthusiasm there might be for a compulsory license.³¹⁸ Some even argue that exchange technologies could be a *replacement for*, rather than an adjunct to, private exchange institutions. Copyright holders would post information about their photos, musical compositions, and text on a single, comprehensive exchange network. Buyers would select the desired content, and either pay the seller's posted price or negotiate price directly. Widely dispersed buyers and sellers of multimedia IPRs would be linked on a computer network, allowing them immediately to identify each other and negotiate a transaction. Such a network could also go beyond this simple matching function. It could list standard prices for certain stock works and even provide for electronic distribution and billing when a sale was made.

The possibility of technological exchange systems suggests an interesting issue for transaction cost analysis: under what circumstances will firms adopt a comprehensive transactional technology to replace a cooperative governance structure? In other words, when will technical means for facilitating direct, bilateral exchange be superior to an insti-

316. See, e.g., Seybold Multimedia Report (describing operation of Picture Network International, Inc., an online stock photography service with more than 30 "stock houses" supplying images, which currently number some 250,000 images, and which has plans to expand its portfolio to include photos from other sources):

We first saw Picture Network International and its natural-language search software, Seymour, at [a trade show] last June . . . [There], it created quite a stir among the online services because of its sophisticated search engine that allows creative people to enter vague ideas in English and quickly receive pertinent responses of kindred photographs. . . . Although PNI is a service, it will also consider selling the software to companies that want to create their own inhouse libraries.

317. Cf. John Holusha, *A Photo Library at a Few Clicks of the Keyboard*, N.Y. TIMES, Oct. 30, 1995, at D5 (describing World Wide Web site for various stock photo organizations, including Picture Network International).

318. Some astute commentators have long predicted that this would be so. See, e.g., Goldstein, *supra* note 56, at 1139 ("In the case of computers, the same capacities that might appear to require compulsory licenses will also provide the vehicle for freely negotiated licenses.").

tution?³¹⁹ The answer will turn on the perceived costs and risks of inventing and using the technology, versus the costs of establishing and participating in institutions. At a minimum, proponents of a comprehensive, direct exchange mechanism will have to confront one large cost and two key risks. The cost relates to volume: few copyright owners will have the time and resources to deal directly with each individual licensee. This will be true at least where many licensees want to use the work. The two risks are as follows: (1) the risk that content "posted" to the system is not owned by the party who posted it, meaning not only that any royalties paid to this party are wasted, but also that a "licensee" who uses it is actually infringing; and (2) the risk of piracy, i.e., that someone will figure out a way to download content over the network without paying for it. Until this cost and these risks are addressed, direct transactions may well be inferior despite their technical feasibility.

Although transactional technology holds promise as a sophisticated way to construct a market, this brief discussion of its risks sheds light on the comparative advantages of semi-internalized exchange through institutions. Indeed, if traditional concepts of vicarious liability are applied to a firm operating a transaction system, it may wind up looking more like a transactional institution anyway. It might well see the need for internal governance, such as deciding on criteria for checking ownership claims. It may need to develop an arbitration service, akin to the one used by the Writer's Guild, to settle disputes over ownership and credit. And, importantly, it may find that under some circumstances "collective valuation" inside the institution helps establish legitimacy for the prices asked. Indeed, if committees of experts are brought in to help set prices, we might expect some discussion by members of appropriate representation on the committee, decision-making procedures, etc. Notice how close this would come to the way ASCAP and some patent pools currently operate.

In addition, like all networks, an electronic exchange system would only work if a critical mass of buyers and sellers signed on to it.³²⁰ Especially where competing systems proliferate, it is impossible to predict

319. I argued in an earlier paper that such an electronic system could be established to replace then-existing inefficient institutions in the market for ocean bills of lading, which are ownership documents covering seaborne cargoes. See Robert P. Merges & Glenn H. Reynolds, *Toward a Computerized System for Negotiating Ocean Bills of Lading*, 6 J. L. & COMM. 23 (1986). This has since come to pass. See Richard Brett Kelly, Comment, *The CMI Charts a Course on the Sea of Electronic Data Interchange: Rules for Electronic Bills of Lading*, 16 MAR. LAW. 749 (1992).

320. Katz & Shapiro, *supra* note 153, have modelled the problem of competing "standards" with respect to products that exhibit network externalities, i.e., those products that consumers value in part because (many) other consumers have "adopted" them. Software operating systems, the standard QWERTY keyboard layout on typewriters, and all forms of language have these properties.

which one (if any) will emerge.³²¹ The history of ASCAP demonstrates that it is impossible to predict *which* of the conceivable alternatives will in fact prevail. If ASCAP had initially included “rank and file” musicians, it might never have gotten off the ground,³²² but other institutions would likely have emerged in its place. If influential creators of multimedia “inputs”—e.g., Stephen King, Michael Jackson, and Paul McCartney—banded together to establish institutions for the exchange of IPRs, those institutions would have a much better chance of success. In other words, the institutional/technological combination that will emerge in the multimedia industry will be at least partly “path dependent.”³²³

b. Vertical Integration and Institutions

Some firms avoid the transaction costs of multiple licenses either by producing their own content,³²⁴ or by building a large in-house library. But vertically integrating content has some important limitations. Hiring musicians and artists to create original content may be cheaper under some circumstances, but in-house works seldom achieve wide public recognition. Most people would prefer a Beatles soundtrack on their multimedia product to generic rock and roll produced “in house” by a local “for hire” band.³²⁵ And, of course, a rock group that has already achieved recognition would not go “in house” for a multimedia firm.³²⁶

321. Cf. Debby Patz, *Stock Photos Go Online*, FOLIO: THE MAGAZINE FOR MAGAZINE MANAGEMENT, Dec. 1, 1993, at 34 (describing competing systems that provide digital photos online).

322. The same hypothetical could be applied to BMI.

323. See, e.g., ALFRED CHANDLER, *THE VISIBLE HAND* (1977); Walter W. Powell, *Expanding the Scope of Institutional Analysis*, in *THE NEW INSTITUTIONALISM IN ORGANIZATIONAL ANALYSIS* 192 (Walter W. Powell & Paul J. DiMaggio eds., 1991).

324. See Lambeth Hochwald, *Copyright: Will It Do You Wrong?*, FOLIO: THE MAGAZINE FOR MAGAZINE MANAGEMENT, April 15, 1994, at 46 (emphasis added):

The complex part, in other words, involves trying to determine exactly how to compensate an author if a CD-ROM incorporates text, video footage and information based on a book. “If 10 percent of the information came from the author, and the CD-ROM retails for \$ 100, we sit down with that author and determine that the author will receive a royalty of 10 percent of the 10 percent of the CD-ROM content, meaning \$ 1 per unit sold,” says [Bob] LaPointe[, President of Inc. Business Resources, a division of Inc. Magazine that makes instructional management materials]. Of course, the author isn’t the only creative contributor. “It can become a bookkeeping nightmare. We try to keep our relationships aboveboard, but at the point where it becomes too much of a burden, we’ll do the content ourselves.”

325. See Gast Multimedia Comments, *supra* note 296, at 460:

I don’t think right now that the multimedia industry has the kind of money that’s needed to do a true entertainment product, because I think to catch the attention of the public, they’re going to have to use entertainment properties that people are familiar with.

326. Indeed, I have argued that property rights over creative work are successful partly because they allow people like musicians to operate independently, i.e., as non-employees, yet sell their work product to companies large enough to package and distribute it effectively. See *Merges*, *supra* note 97. Also, rock music is sold into many markets besides multimedia, so hiring a popular group as a

However, vertical integration could take another form. Instead of creating work in-house, firms may acquire rights to existing works, thereby assembling a library of works to be made available to potential users. A Microsoft subsidiary, Corbis, Inc., for example, recently purchased the Bettman Archives, a huge library containing over 16 million historical photographs.³²⁷ Corbis' goal is to offer its complete library of photos to users over a digital transmission and billing system. Traditional stock music, film, and text firms serve the same function by making available entire libraries of material that they own outright.³²⁸ Certain large acquisitions in the television and movie industries have even been attributed to a desire to obtain extensive libraries of film or television content.³²⁹

For many independent right holders, however, selling all rights to a stock library agency would appear to have some clear disadvantages when compared to participation in one or more voluntary institutions. The greatest disadvantage is the risk that today's price will turn out to underestimate the true worth of the content. In a word, selling content outright involves a loss of flexibility. Stock libraries typically acquire exclusive, long-term rights over the works in their portfolio.³³⁰ Right holders selling to a stock house thus have but one opportunity to negotiate a price. Renegotiation due to changing conditions is generally not possible. Private institutions, however, relax many of these constraints. They do not require an all-out, one-time assignment. Members can vote with their feet by exercising the right of "exit." Members can participate in ongoing renegotiations of user prices and intra-organizational royalty splits. The Photographers Agency, described earlier, is an example. It allows members an ongoing participatory interest in the rights-licensing process, as opposed to a one-time cash payment for assigning photo copyrights to a stock photo agency. Retention of control was a strong theme in the press release announcing formation of the

"house band" would either force a multimedia company to enter ancillary music markets or forgo profitable opportunities. Surely the traditional structure of the music industry, where bands remain independent (subject to record deals and the like) and market their own music to many outlets (radio, television, movies, etc.) demonstrates the economic logic of dis-integrated production.

327. See Linton Weeks, *Bill Gates Buys Photo Trove: Microsoft Chief Acquires Famed Bettmann Archive*, WASH. POST, Oct. 11, 1995, at B1. Other vertically integrated photo libraries are available from Comstock, Inc., The Image Bank, Inc., and other sources. See Zimmerman, *supra* note 281, at 37.

328. See Smallson, *supra* note 300, at 55 (describing film archives and stock music companies). On stock film, see Zimmerman, *supra* note 281, at 56.

329. See Henry W. Chesbrough & David J. Teece, *When is Virtual Virtuous? Organizing for Innovation*, HARV. BUS. REV., Jan.-Feb. 1996, at 65.

330. This is not generally true of so-called "stock" photo agencies, which typically hold nonexclusive rights to photos on a limited-time basis. See *supra* note 308 and accompanying text.

Photographers Agency's joint venture to distribute members' photos electronically.³³¹

Where the costs of ongoing monitoring, renegotiation, and participation are too high compared to the underlying value of the work(s), right holders will assign to a stock agency. Transaction cost literature predicts as much. Just as a firm will bring outside contractors "inside" as employees when the cost of monitoring the contractors goes too high, so with content and the rights that cover it. And the reverse holds as well: where the value of the work(s) justifies it, right holders can be expected to avoid stock houses in favor of ongoing participation in voluntary institutions. The most valuable works are those most likely to find their way into private institutions. So while stock houses will accumulate "commodity" content, we should not expect them to acquire many rights to high-value content. Where vertical integration of content does occur, it will likely be through mergers. Although such mergers may involve some well-known content libraries, they will probably still leave out a great many works. Voluntary institutions, then, may well come to serve the void left between stock houses and mega-mergers.

3. *Government Policy and Multimedia*

Does the work of the new institutionalists provide guidance regarding the proper government policy toward the development of multimedia? Elinor Ostrom has taught us the importance of government policy toward private resource allocation institutions. She attributes the success of voluntary water allocation and distribution institutions partly to California administrative officials who did not become involved until the parties had worked out the basic contours of the organization. Translating Ostrom's theories to the multimedia context, we can conclude that the first lesson is to keep hands off during the formative stage. She also points to the beneficial effects of certain state subsidies, such as supply of technical experts. Such state support could also be helpful in the multimedia context.

Below I discuss what steps government might take with regard to private IPR exchange institutions in order to facilitate transactions in the

331. Photographers Agency Press Release, *supra* note 309 (quoting Ray DeMoulin, Photographers Agency President and CEO):

[American Society of Media Photographers] photographers who join the MP©A [Media Photographers Copyright Agency] now have access to an agency specifically designed to promote their work, to provide them with more control over the distribution of their photographs, and to address the licensing and copyright issues associated with the digital distribution of photographic images. . . . The MP©A is establishing simplified trade practices for photographers to distribute images digitally and is enabling photographers to have more control over the terms of digital image transactions. What MP©A and AGT are doing with MP©A In View will give our members a venue for meeting the increased demand for digital images, while lowering transaction costs for both buyers and sellers.

multimedia industry. The first step, keeping hands off, means no liability rule regimes for multimedia. But what about the second step? How can government give constructive, supplementary assistance to IPR institutions? In the two Sections that follow, I describe two means. The first is on the drawing board now: a statutory requirement that all digital content be accompanied by ownership and contact information. The second is a bit more speculative. The government would actively encourage investments in new transactional technologies and institutions by providing incentives for "organizational entrepreneurs."

a. Rights Management Information and the National Information Infrastructure Task Force

One proposal for supportive government involvement has been developed by the Working Group on Intellectual Property Rights of the Information Infrastructure Task Force ("IP Working Group"), a government task force charged with clarifying the legal environment for multimedia works and other content on the "information superhighway." The IP Working Group proposes to require all digital content to be accompanied by ownership and contact information.³³² Such "copyright management information" would tell prospective users who owns the rights to each work, and how to contact the owner. It might even include standard licensing rates. This information would assist in the operation of private exchange mechanisms. Any music, photo, or text pulled off the Internet would come with information about who owned the rights and how to contact them. Armed with this information, prospective users of the work would find it easier to obtain a license. With transactional hurdles thus lowered, entrepreneurs might be encouraged to start digital clearinghouses.³³³

332. See *Information Policy: Final Report is Issued on IP and Information Infrastructure*, 50 PAT. TRADEMARK & COPYRIGHT J. (BNA) 552 (September 14, 1995) (hereinafter *IP Infrastructure*); INFORMATION INFRASTRUCTURE TASK FORCE: INTELLECTUAL PROPERTY AND THE NATIONAL INFORMATION INFRASTRUCTURE: THE REPORT OF THE WORKING GROUP ON INTELLECTUAL PROPERTY RIGHTS (1995) (hereinafter "NII Report"), at 191-95, 235-36.

333. At first glance this might seem to suggest that there is no need for exchange institutions at all. This possibility is discussed in the next Section. Certain of the provisions on copyright are criticized as "overbroad" in the legislative comments submitted by an umbrella group organized to prevent wholesale adoption of the NII Report's recommendations. See Digital Future Coalition, Statement of Members of the Digital Future Coalition on H.R. 2441: The NII Copyright Protection Act of 1995, available on the Digital Future Coalition's world wide web site, <<http://www.ari.net/dfc/info/copyright.html>>.

There is evidence of competition already in the clearinghouse field. See, e.g., "Publishers Depot" World Wide Web Site at <<http://www.publishersdepot.com>> ("your one-stop site for digital photography, fonts, video and audio, illustrations, maps . . . and much more."); "Photo Disc Image Exchange," World Wide Web Site, at <<http://204.162.147.30/photodisc/cgi>> (accessed via <<http://photodisc.connectinc.com/photodisc/html/index.htm>>). There is also evidence that clearinghouses are beginning to emerge for digital text as well. See National Writers Union and the UnCover Company Create Copyright Model for Electronic Database Industry,

The IP Working Group recommends that the Copyright Act be amended to prohibit deletion of any such copyright management information.³³⁴ Congress has put forth two bills implementing the IP Working Group's recommendations, although they are unlikely to pass.³³⁵ Although the bills would not make such information mandatory,³³⁶ content owners would have a strong incentive to include it.

Copyright management information lowers the informational costs associated with digital works. Perhaps it will even enable direct exchange to the exclusion of voluntary institutions. I think this unlikely, however. As elaborated earlier in the Sections on transactional technology³³⁷ and vertical integration,³³⁸ institutions do much more than facilitate contact between buyer and seller. They also provide a forum for shared expertise regarding valuation (i.e., pricing) and contractual terms. Finally, they afford distinct economies of scale in the crucial area of enforcement costs. Even if rights management information lowers the cost of locating right holders, collective rights institutions will still offer distinct advantages.

b. Policies to Encourage Investments in New Transactional Technologies

Transactional technology is no different from other technologies with public good aspects or "spillover" potential. It presents an appropriability problem akin to investments in information, new machinery, and the like. Indeed, patents on transactional technologies are now becoming commonplace, suggesting that the Patent Office considers them no different from other inventions.³³⁹ Although I have expressed the need for caution with patents of this type, current trends indicate that

<<http://www.carl.org/uncover/nwu.html>> (describing arrangement for on-line text distribution of UnCover Company's 7 million items, and royalty payment to National Writers Union's 4,500 writers).

334. *IP Infrastructure*, *supra* note 332, at 553.

335. *Legislation: Proposal Would Direct IP Traffic on the Information Superhighway*, 50 PAT. TRADEMARK COPYRIGHT J. (BNA) 633 (Oct. 5, 1995) (discussing identical House and Senate bills, S. 1284 and H.R. 2441):

Section 1202 would prohibit the dissemination of false, or altered, "copyright management information," i.e., information that identifies the author of the work, the copyright owner, the terms and conditions for uses of the work, etc. The new chapter [12 of the Copyright Act] includes civil and criminal remedies for violations of its provisions.

336. *IP Infrastructure*, *supra* note 332, at 553:

While this information will serve as a "license plate for a work on the information superhighway," copyright owners will not be required to provide it, the working group made clear. Transmitters would not be required to include such information where it has been included in a work, the report noted, adding that such a proposal deserves further consideration.

337. *See supra* Part IV.B.2.a.

338. *See supra* Part IV.B.2.b.

339. *See* Lisa Fickenscher, *Patents: An Impending Problem for Banks*, AM. BANKER, Dec. 29, 1994, at 12.

they will continue to be issued.³⁴⁰ If in certain instances institutions may be substitutes for transactional technology, then one must ask, why treat institutions differently at the hands of patent law? Why not, in other words, grant patent-like privileges to the organizers of transactionally-oriented *institutions* as well as *technologies*?

Many concepts from the literature on investments in innovation parallel the concepts used in the literature on collective action, although terminology differs substantially. The innovation literature speaks of investments that have spillover effects, and therefore create an appropriability problem; the collective action literature speaks of a collective action problem, created by the threat of free riders, that requires some organizational solution. They both make the same point: the difficulty of capturing a return on investments that create spillover benefits—i.e., positive externalities—for others. What is needed to bridge the gap is a fully worked-out concept of the “organizational entrepreneur.”

The concept of the “organizational entrepreneur” includes the notion that even a risk-loving entrepreneur would find that though net profits are theoretically attainable, free rider problems could prevent implementation. In such cases private action may prove insufficient to establish the institution. Of course, such cases parallel the conditions said to justify award of a patent.³⁴¹ For these reasons, an otherwise nonobvious scheme for facilitating IPR exchange ought to be considered carefully for patent protection. Although in many cases patents on “methods of doing business” may not be necessary to call forth appropriate investment, novel transactional concepts might occasionally be a socially worthwhile exception. And, if the patent office and courts continue to grant patents on business concepts, there is no reason to discriminate against transactional innovations.

In addition to the positive stimulation of patent protection, policy makers ought to consider removal of antitrust threats to organizational entrepreneurs. Because individual firms must join together, transaction-facilitating institutions run the risk of violating antitrust prohibitions on

340. For example, one recent patent, though styled as a “computer system,” in actuality contains broad claims to the business concept of remote, home banking via computer. See U.S. Patent No. 5,220,501, to Matthew P. Lawlor et al., “Method and System for Remote Delivery of Retail Banking Services,” Issued June 15, 1993, assigned to Online Resources, Ltd. (E.g., claim 1: “A system for conducting financial transactions using an ATM network of the type connected to at least one financial institution . . .”). It is not too far a jump from patents such as these to patents for transactional technologies such as those that will be needed in the multimedia environment. *But see* State Street Bank and Trust Co. v. Signature Financial Group, Inc., 38 U.S.P.Q.2d 1530 (D. Mass. 1996) (holding financial service patent invalid as unpatentable subject matter under § 101 of the Patent Act).

341. See, e.g., DOUGLASS C. NORTH & ROBERT PAUL THOMAS, *THE RISE OF THE WESTERN WORLD: A NEW ECONOMIC HISTORY* 154-155 (1973) (describing importance of patents as an institution designed to bring the private rate of return more in line with the social rate of return—i.e., to internalize positive externalities).

“horizontal” arrangements. The antitrust enforcement actions against patent pools and copyright CROs pose very real obstacles for anyone trying to knit firms together in a cooperative licensing venture. Although the recent draft Licensing Guidelines from the Antitrust Division of the Justice Department seem to recognize that some CROs might be beneficial, they still reflect a general suspicion of these institutions that might well deter an organizational entrepreneur.³⁴²

The solution is to announce a rule of reason analysis for transaction-oriented institutions that explicitly takes account of the following factors:

- the transaction cost economies of the institution;
- the presence of competitors, or conditions for entry;
- the governance structure of the institution, including representation among right holders and voting rules for royalty distributions and the like; and
- the need for collective action in overcoming barriers to investment in institutional and technological infrastructure.

Together with the possibility of patent protection, this promise of fair treatment under the antitrust laws will go a long way toward ensuring that organizational entrepreneurs will bring good ideas to facilitate IPR exchange to fruition.

A “first cut” in the direction of organizing IPR exchange mechanisms—institutional and technological—is set forth in Figure 5.

342. See Notice, Dept. of Justice, Antitrust Division, Request for Comments on Draft Antitrust Guidelines for the Licensing and Acquisition of Intellectual Property, 59 Fed. Reg. 41339, 41347 (1996). The Guidelines state:

Cross-licensing and pooling arrangements . . . may promote economic welfare by integrating complementary technologies, reducing transaction costs, clearing blocking positions, and avoiding costly infringement litigation.

On the other hand, they also caution that pooling “can have anticompetitive effects.” *Id.* Crucial to this Article, the Guidelines emphasize the anticompetitive effects of horizontal coordination and price setting:

The joint marketing of pooled intellectual property rights, with collective price setting or coordinated output restrictions, may violate Section I of the Sherman Act. [*Broadcast Music, Inc. v. CBS*, 441 U.S. 1 (1979)]. . . . Cross-licensing and pooling arrangements among parties that collectively possess market power may, under some circumstances, harm competition by significantly disadvantaging competitors.

Id., at 41347-48.

FIGURE 5
 TYPOLOGY OF IPRs AND TRANSACTIONAL MECHANISMS

		Nature of Rights	
		Formal	Informal
Transactional Mechanism	Bilateral Exchange	© and Patent licensing	Trade secret licensing; idea submissions
	Institutions	ASCAP and other Collective Rights Organizations Patent Pools "Stock" Photo Agencies Harry Fox Agency Trademark Mediation Group	Fashion Guilds Informal know-how trading Script Registries Employee suggestion box systems "Customary" copyright
	Transactional Technology	Proposed multimedia clearinghouses	"Shareware"

C. Relationship to Theory: Investing in Institutions to Reduce Transaction Costs

The work of Eggertson, Field, and Papandreou discussed earlier sheds some interesting light on the question of which multimedia institutions will emerge. Where a collective institution lowers the cost of excluding trespassers (or infringers), it can be used to augment private enforcement of property rights. This principle is applicable to the IPR context.

With some slight modifications, Field's model can be used to explain some features of IPR institutions. Firms in an industry are faced with the decision whether to rely on individual rights to exclude infringers or pool rights in a collective organization.³⁴³ They trade off enforcement costs associated with individual rights against the costs of founding and participating in the institution. Although joining such an

343. Note that in the Field model, an omniscient social planner is deciding whether to assign individual property rights, and if so, how large to make them. Decisions of firms holding individual intellectual property rights are obviously different. They will look to maximize firm, as opposed to social, welfare. In addition, they are deciding whether to cede some aspects of the property rights they already have, as opposed to deciding on an initial assignment of rights.

institution involves ceding some individual control, it may lower costs overall. If so, firms will decide to join. The CROs studied in this Article are the product of just such decisions. And with respect to the discussion of "private intellectual property systems," Papandreou (along with Field) can be read to embrace the possibility that enforcement with the aid of private institutions can be cheaper both for firms and for society than exclusively private enforcement.

CONCLUSION

A. The Future Direction of Intellectual Property Policy

Existing literature has ignored the increasing role of IPRs as essential inputs in commercial products. This Article has demonstrated that IPR exchange institutions can facilitate the high-volume licensing often required by users of these IPR inputs. It makes the following policy recommendations to ensure that the use of IPRs as inputs is not hindered. First and foremost, create the conditions for private parties to bargain into contractual liability rules. To do so, grant property rule entitlements in almost every case. Second, explicitly embrace "private intellectual property systems" when they work tolerably well and do not have devastating anticompetitive effects. Third, when contemplating antitrust enforcement actions against IPR collectives, consider the enormous transaction cost savings they engender. Be lenient toward the "group boycott" aspect of the private IPR system when it is the only effective way for members to appropriate returns from research and development. Fourth, facilitate institutional organization, perhaps via enhanced incentives to "institutional entrepreneurs" or outright government assistance in clearinghouse formation.

B. Expanding Entitlements Theory in Light of the Institutions Studied

Recall the old economics joke, wherein the economist asks, "Sure, it works in practice; but will it work in theory?" This Section answers yes: the institutions studied in this Article will make sense, so long as we make a few minor adjustments to the theory. In particular, this study of collective rights organizations bears on two aspects of the theory of legal entitlements: first, whether to favor property rules over liability rules; and second, what role property rules can play in the creation of exchange mechanisms.

Our focus on intellectual property demonstrates some novel reasons to believe that liability rules do not always induce private bargaining as effectively as property rule entitlements. In some cases, including intellectual property, property owners cannot effectively bargain upward from the liability rule price. Where rights cover intangible assets, there is no way for the owner to tell true potential infringers from rent-

seeking opportunists who merely announce an intent to infringe. In other words, the class of potential infringers the owner must pay not to exercise their right to use the property will expand as soon as firms learn that the owner is paying others not to infringe. This explains why in the case of one well-known liability rule in copyright, the “mechanical” or “song cover” compulsory license, bargaining is always downward from the statutory rate, never upward. The superiority of property rule entitlements in the IPR context is therefore clear.

The second contribution to entitlement theory has to do with the way firms move from property rule entitlements to institutions for repeated exchange. In the pioneering entitlements framework of Calabresi and Melamed, liability rules entail “collective valuation”: court-determined compensation to an owner when a right has been violated. Property rules are the opposite: strictly individual valuation with prices set by the right holder alone. The IPR institutions studied here show that this is a false dichotomy. These institutions represent intermediate forms of collective valuation. Firms work together to establish a collective price charged to licensees for use of the members’ IPRs. They agree on rules for splitting licensing fees among members. They often participate in the ongoing administration of the collective institution, by adjusting prices due to changing conditions, arbitrating disputes, and the like.

Putting these two observations together is the final contribution to entitlement theory. Intellectual property rights, consummate property rule entitlements, are often fragmented among many firms in an industry. Marketable products require many IPR inputs and therefore many IPR transactions. Because IPRs are property rule entitlements, using them requires separate bargains with individual right holders. Where firms are involved in such transactions repeatedly, institutions for regularized IPR exchange tend to emerge. Because they grow out of repeated dealings by knowledgeable industry insiders, and because their internal governance allows for ongoing administrative adjustments, they are more efficient than the compulsory licenses (legislative liability rules) found in parts of intellectual property law. We might call these superior institutions “private liability rules,” and the process of creating them “contracting into liability rules,” labels that suggest their intermediate nature somewhere between pure individual property rights and pure government-determined liability rules.

Property rule entitlements push right holders together to found these institutions. Thus we end with what seems like a paradox. To encourage effective collective valuation mechanisms—liability rules—one should start with a property rule. The pressure of high transaction costs

in an industry where repeat dealings are the norm will produce a better transactional mechanism than a legislature could create in advance.

That, at least, is the lesson of experience in the IPR context. The next project is to apply these new insights to experiences in other contexts. Otherwise, what passes for “theory” will begin to look more and more like just a stylized story—a neat but skeletal account of the facts, with interesting analytic implications. The mechanisms that have evolved to handle the exchange of real-world entitlements must find their way into entitlements theory. Otherwise, that theory will cease to be of any practical interest, which would be a shame considering the contributions it might make to pressing policy issues such as the proper structure of rights in multimedia IPR inputs.

