Transaction Costs And Antitrust Concerns In The Licensing Of Intellectual Property

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I am honored to be invited to address the Licensing Executives Society—an association distinguished by its interdisciplinary approach to the challenging issues presented by modern licensing, issues in which law, economics, finance, business, and technology are inextricably intertwined. My emphasis today will be on the law and economics interface, and specifically on the pressure that the high transaction costs incurred in licensing intellectual property exert on legal principles ranging from fair use in copyright law to tying doctrine in antitrust law.

Licensing—which is to say the granting of permission for another person to use your property, usually temporarily, as opposed to the sale of the property—is, in the case of physical property, generally unproblematic. If you rent a car, or lease an apartment or an airplane, the transaction is usually quite straightforward; in economic terms, which are the terms in which this lecture will largely be cast, the costs of transacting are low relative to the value of the license. (Transaction cost must not be confused with the license fee, or in other words the contract price. The fee is a measure of the value of the transaction; the transaction cost is the cost of making the transaction and thus realizing the value. The higher that cost, the less likely the transaction is to be made.)

The situation is different in the case of intellectual property, partly because of its invisibility, partly because of its ready appropriability, and partly because of its divisibility. To explain: Because most intellectual property lacks a physical locus (an original painting or sculpture would be an exception), there is often difficulty in defining, let alone discerning, the boundaries of what exactly is being transferred in a license of intellectual property. Because intellectual property is readily appropriable simply by being copied (in contrast to a rental car, for example, which can be appropriated only by being stolen), preserving one's property rights when one licenses intellectual property is often difficult. And because intellectual property is divisible simply by being copied (try dividing a rental car), the same property may be licensed to a multitude of licensees, creating complex business relations.

Different types of intellectual property involve different aspects of the licensing problem. I'll give a few examples. In the licensing of a copyright, there is often a serious problem just of identifying the copyright owner. Unlike the situation with regard to physical property, a copyright owner is not required to register his title in order to preserve his property rights. Even though the requirement that copyrights be registered to be valid has been abolished, there is still a copyright registry, and there are procedural advantages to registering one's copyrights. But failure to register does not work a forfeiture, so that merely failing to find a work listed in the copyright registry does not assure the would-be copier that the work is in the public domain. The costs of identifying and negotiating with the owner of a copyright are not great in absolute terms, but they are great relative to the value of most copyrighted works, especially older ones— works first published between 1923 and 1977, which prior to the enactment of the Sonny Bono Copyright Term Extension Act would have begun to fall into the public domain in 1998, will now remain under copyright until the end of 2018 at the earliest and 2072 at the latest (longer, if Congress extends the term of copyright again). Which means that copyright licensing costs will often constitute a real barrier to a value-maximizing transaction.

Another factor in copyright licensing costs is that the scope of copyright protection is inherently rather vague. For example, the licensor will usually reserve to himself the right to copyright any derivative works of the licensed work. But if the licensee creates a new work that resembles to some degree the licensed work, it may be unclear whether the new work is a derivative work.

The licensing of patents and trade secrets presents other problems. In the case of trade secrets, the main problem is that the owner of the secret will find it difficult to interest potential licensees without revealing elements of the secret in negotiations, but the revelation may convey enough information to the potential licensee to enable him, without need for taking out a license, to unravel the entire secret. This problem can also arise in the copyright setting if the creator of a new work wants to license it before it has been completed; attracting a licensee may require him to communicate noncopyrightable elements of the work during the license negotiations, such as title, idea, and rough sketches of characters, which may enable the

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potential licensee to create without need for a license his own copyrighted work, largely duplicating but not infringing the would-be licensor's copyrighted work.

In the case of patents, there is the question whether the licensee shall be permitted to patent improvements on the licensed patent, which would block the licensor from practicing the improved form without a license from the licensee-improver. The license can provide that the improvements belong to the licensor, but this may retard the process of perfecting the patented process or product to the detriment of the licensor. And if, as if often the case, the licensor intends to continue producing the licensed product, the parties must negotiate terms, such as a minimum resale price, to protect the licensor from losing his entire product market to a more efficient licensee.

My last example concerns trademarks. Because the chief significance of a trademark is as a warrant of uniform quality of the trademarked product or service, the owner of a trademark cannot simply license its use to other products. He must monitor the activities of his licensees to make sure that they are maintaining uniform quality, for if they are not, the trademark may be forfeited in order to protect consumers against confusion, or in more technical terms to minimize consumer search costs.

These examples and others that could be given show that transaction cost, which is to say not the value of a product involved in an exchange but the cost of effectuating the exchange, is a real threat to the rapidity and economy with which free markets enable intellectual property to be allocated to those who value it the most. This means that an important focus of legal reform should be on means of reducing IP transaction costs, or, equivalently, IP licensing costs. One direction of reform is by expanding the scope of implied licensing, that is, of permission to use intellectual property without having to negotiate permission. Implied licensing already plays a very large role in intellectual property; and this is tacit recognition of how high the explicit costs of transacting in such property are frequently so. For example, if you want to copy short passages from a copyrighted work, you can do so without getting the copyright owner's permission. This is the domain of the important doctrine of "fair use," which has counterparts in patent and trademark law, though I will not have time to discuss them, beyond remarking that the right to patent an improvement of a product or process patented by someone else could be thought a form of fair use. The counterpart to fair use in trade secret law is the right to discover a trade secret by reverse engineering.

For the most part, it is only because IP transaction costs are high that a doctrine such as fair use exists. It would be very odd to think that, as long as I want to take my neighbor's car for just a *short* joy ride, I should be able to do so without asking his permission.

Now if a licensee wants a contract, you as licensor can (for a price obviously) impose limitations on the licensee's fair-use right, just as a patentee can reserve the rights to his (explicit) licensee's patent improvements. What fair use does is create a broad area in which, since you can get a license without negotiating with the copyright owner, licensing costs are reduced to zero.

An alternative to the implicit, cost-free, fair-use type of license is the compulsory license, where, again, the licensee doesn't have to negotiate with the licensor, and so licensing costs are zero. The fee that the licensee under a compulsory license must pay is not to defray the licensing costs, in whole or part, but to compensate the copyright owner for the value of his property (more precisely, the value represented by the copyright). The fee thus is the equivalent of the contract price, and is distinct from the transaction costs, the costs of making the contract, which are still in this example zero. So compulsory licensing, like fair-use type licensing, is another testament to the perceived significance of intellectual property licensing costs as a barrier to the efficient allocation of such property.

Another response to those licensing costs consists of private IP rights organizations and private IP registries, the former being illustrated by ASCAP and BMI and the latter by the visual-arts registries—the Artists Rights Association and the Visual Artists and Galleries Association. These associations help people who want to reproduce works of visual art to obtain licenses from the copyright holders. Each organization publishes a list of the artists it represents, keeps a slide catalogue of works of its members, and acts as the artists' agent in negotiating licenses for reproductions of their art in books, postcards, merchandise, advertisement, films, and so on. Once again, the existence of such organizations testifies to the significance of licensing costs in the intellectual property field, most dramatically in the case of the musical performing-rights organizations such as ASCAP. If a radio station had to negotiate separately with the owner of the copyright on each song that it wanted to play, the aggregate licensing costs for a program of popular music would be astronomical.

The economizing effect of private registries would be enhanced if, as the copyright lawyer William Patry and I have proposed in an article shortly to be published in the *California Law Review* ("Fair Use and Statutory Reform in the Wake of *Eldred*"), the copying of old copyrights (concretely, copyrights still in force only by virtue of the Sonny Bono Act) were deemed a fair use if the owners of the copyrights had failed to place would-be copiers on use, as by registering them in a private registry that such copiers could consult. Such a rule would provide a strong impetus to the formation of such a registry, analogous to the visual-rights registries that I mentioned, with a consequent reduction in copyright licensing costs.

Let me turn now to the other great issue concerning the licensing of in-

tellectual property besides transaction costs, and that is the restrictions that antitrust law imposes on such licensing. I shall have time for only a few topics in this rich field.

The reason antitrust figures more prominently in the licensing of intellectual than of physical property is that a patent or copyright confers a legal "monopoly" on the patent or copyright holder. This usage though common is unfortunate, because it confuses an exclusive right with an economic monopoly. I have the exclusive right to the use of my house, but I am not a monopolist and would not be even if the house were very valuable. A patent or copyright does carve out an area of exclusive rights, but whether the right holder can use his right to obtain a monopoly return depends on whether there are good substitutes for his product; if there are, he will not be able to obtain a monopoly return. And that is the usual case. But this has never been adequately understood by the law; hence the pervasive restrictions that antitrust law imposes on IP licensing, though the situation is improving, as we shall see, as courts become more sophisticated about economics.

I begin with patent tie-in cases, cases in which the patent owner conditions the use of his patented process or product on the licensee's buying another, unpatented product from him, as when, in the early *A.B. Dick* case, the patentee of a mimeograph machine required his licensees to agree to buy the ink they used in the machine from him. The antitrust concern was that by telling the buyer that he couldn't have the use of the tying product (the patented product or process) unless he agreed to buy a separate product from the seller as well, the seller was trying to "lever" or "extend" his monopoly to the market for that separate product—only extending it in product space rather than in time. This reasoning does not make good sense. If the seller tries to charge a monopoly price for the separate product, the buyer will not be willing to pay as much for the tying product as he would if the separate product, which he has to buy also, were priced at a lower rate. The two products are complements; raising the price of one reduces the demand for the other. Acquiring monopoly power in the tied-product market thus comes at the expense of losing it in the tying-product market.

Patent tie-ins are adopted (when allowed by the law) not to enable a seller to "lever" his existing monopoly into acquiring a second monopoly but for other reasons, such as to facilitate price discrimination. In *Dick* the price that licensees of the mimeograph machine were willing to pay for its use was probably more or less proportional to the amount of use they envisaged and so to the amount of ink they used. Requiring them to buy the ink from Dick enabled Dick to vary the effective price they paid for the machine according to their elasticity of demand, as proxied by the amount of ink they consumed. The more they used the machine, the more value they were getting from it, and so the more they were willing to pay for it in the absence of a competitively priced close substitute. The less they used the machine, the less they would pay, since their consumption of ink would be less; and so the tie-in would tend to retain low-value customers while "milking" the high-value ones. Since the law permits price discrimination (with immaterial exceptions), there is no reason why it should forbid tie-ins and thus force sellers to resort to less efficient means of discrimination—if they were more efficient, a prohibition would be unnecessary—unless the tie-in has a sinister purpose, which is the exceptional, not the normal, case. Dick could have installed a use meter in each of its machines and varied the price by the amount of use. This would be price discrimination because the determinant of the price paid would be the value to the user rather than the cost to Dick, but it would be lawful.

The most dubious application of the thinking that informed the early patent tie-in cases came in the Supreme Court's much later decision in *Brulotte v. Thys Co.*, which held that a patent owner may not enforce a contract for the payment of patent royalties beyond the patent's expiration date. The Court reasoned that by extracting a promise to continue paying royalties after expiration of the patent, the patentee had extended the patent beyond the term fixed in the patent statute and therefore in violation of the law. That is incorrect. After the patent expires, anyone can make the patented process or product without being guilty of patent infringement. As the patent can no longer be used to exclude anybody from such production, expiration has accomplished what it was supposed to accomplish. If the licensee agrees to continue paying royalties after the patent expires, the royalty rate will be lower. The duration of the patent fixes the limit of the patentee's power to extract royalties; it is a detail whether he extracts them at a higher rate over a shorter period of time or at a lower rate over a longer period of time. Charging royalties beyond the term of the patent merely alters the timing of royalty payments, as would be obvious if a patent-licensing agreement obligating the licensee to pay royalties for the next 100 years went into effect a day before the patent expired. The royalty *rate* would be minuscule because of the imminence of the patent's expiration. And, to repeat, as soon as it expired, regardless of the payment terms, competitors would be free to use the patented process or product.

The rule of *Brulotte* has become particularly anomalous since a 1988 amendment to the patent statute which provides that "no patent owner otherwise entitled to relief for infringement…shall be…deemed guilty of misuse or illegal extension of the patent right by reason of his having…conditioned the license of any rights to the patent or the sale of the patented product on the acquisition of a license to rights in another patent or purchase of a separate product" unless the patentee has market power in the market for the conditioning product. The effect is to confine the doctrine of the patent tie-in cases to ones in which

the patentee has real market power, not merely the technical monopoly (right to exclude) that every patent confers. This is a welcome curtailment of the doctrine but unfortunately falls short of overruling the *Brulotte* decision. It places a limit merely on defenses to patent-infringement suits, and a patentee seeking to enforce an agreement to pay post-expiration royalties can't be suing for patent infringement; his patent has expired. And although the rationale of *Brulotte* is the same as that of the discredited tying cases—the Court even said in *Brulotte* that to "use that leverage [the power conferred by the monopoly] to project those royalty payments beyond the life of the patent is analogous to an effort to enlarge the monopoly of the patent"—and not a whit stronger (probably even weaker, since there is only one product), the new statutory defense is limited to tying, as its language makes clear.

Brulotte does not reflect the Supreme Court's current thinking about competition and monopoly, but it will continue to bind the lower courts until the Supreme Court decides to overrule it.

Earlier I mentioned the performing-rights organizations. In the case of *Broadcast Music, Inc. v. Columbia Broadcasting System, Inc.*, the Supreme Court upheld the blanket licenses issued by the music performing-rights organizations against the charge that such licenses are a per se violation of antitrust law because they eliminate price competition. The blanket license entitles the licensee, for a flat fee, to play any song in the organization's inventory. The organization allocates the receipts among its member composers in proportion to the relative frequency with which their songs are played. In effect the organization is an exclusive sales agency for a group of competitors; by setting the price for the performing rights of its stable of composers, the organization eliminates price competition among them. But this form of price fixing is unusual in enabling a transaction-cost savings that exceeds any reasonable estimate of the deadweight and other possible social costs of the blanket licenses' elimination of price competition, and so it escaped the usual per se condemnation of price-fixing agreements. It is another example of how concern with the high costs of licensing intellectual property can drive law—and rightly so.

The *BMI* case has implications for patent licensing, specifically for the question whether a patentee should be permitted to base royalties on the licensees' revenues from the end product that incorporates the patented input. Let me explain. An additional economic virtue of the blanket licenses for performing music, besides economizing on transaction costs, is that they avoid the misallocation of resources that would occur if some musical compositions, being unique and protected from competition by copyright, were priced far above marginal cost; for this method of pricing would create an incentive for potential customers to substitute compositions that might cost society more per unit of quality to produce or disseminate, and that would be socially wasteful. An end-product royalty has the same virtue as the blanket license; the licensee's decision on how much of the patented unit to use relative to other inputs is not distorted by the unit's being priced above its marginal cost, because the amount of the royalty is invariant to the quantity of the input used.

The legal objection, which I shall take up shortly in connection with bundling, is that end-product royalties are the carrot to tying's stick. Because it costs the licensee nothing to substitute the patented input against the other inputs that he might use to produce the final product, he is irresistibly induced, once he decides to buy some of the patented input (the "tying quantity," call it), to buy the rest of those inputs from the patentee as well (the "tied quantity"). Tie-ins are normally innocuous, however, as we have seen, and the same is probably true of end-product royalties as well.

Consider Microsoft's former practice of basing the fee that it charged manufacturers of PCs for the right to install its operating system on their computers on the manufacturers' total computer sales. This meant that if a manufacturer wanted to install Microsoft's system on at least some of its computers, the marginal cost of installing them on the rest was zero. The effect was almost the same as if Microsoft had required the manufacturers to install its operating system in all the computers they sold, which could be analyzed as a tying arrangement in which the tying product consists of the number of copies of the Microsoft operating system that the manufacturers want to install and the tied product (the product they must take to get the tying product) consists of the number of copies they would prefer not to install.

The antitrust objection to Microsoft's practice (which the company under pressure from the Justice Department agreed in a consent decree to abandon) is bound up with the special issue of network externalities. This term refers to the situation in which the value of a product or service to an individual is greater the more other people buy it, the classic example being telephone service, which is worth more to every subscriber the more subscribers there are. (Consider the value of telephone service if there is only a single subscriber; that value is zero.) Even before the Internet, there were network externalities in computer software because of the value to the owner of a computer of being able to share files. Microsoft's practice, by making it costless for a computer manufacturer who already had a Windows license to install Windows on its computers, since his royalty would be unaffected, would tend to accelerate the spread of Windows, creating the potential by virtue of network externalities to give Microsoft an operating-system monopoly whether or not it had the best operating system.

Another very interesting older copyright antitrust case, and one that turns out to be related both to blanket licenses and to tie-ins, is *United States v. Loew's, Inc.*, where

the Supreme Court invalidated "block booking" in the movie industry as a form of illegal tying. Block booking refers to the movie studios' practice of charging distributors a price for a bundle of movies rather than pricing them separately. In other words, the purchase of any movie in the bundle is conditioned on the purchase of the others; so there is a close analogy to a tie-in. And the motives are similar. When two products are priced separately, the price of each is depressed by the buyer who values each one less than the other buyer does; the bundling eliminates this effect. In technical terms, if A is the low-elasticity demander of product X, and B the low-elasticity demander of product Y, bundling enables the seller of the two products to discriminate against A with respect to X and B with respect to Y while charging them the same price so that arbitrage is prevented.

The profitability of bundling is greater, the more products that can be bundled. For this makes it more likely that the package will contain products that consumers place opposite valuations on, as in our numerical example, where A values X more than B does while B values Y more than X does.

As in this example, bundling, like tying, is often, perhaps characteristically, a method of price discrimination, unless the bundle could not be unbundled without a substantial cost penalty—imagine selling each component of an automobile, the carburetor, brakes, radiator, axles, etc., separately to the consumer. But like the blanket licenses in the music industry, it reduces transaction costs and, like both those licenses and end-product-royalty patent-licensing agreements, it eliminates monopoly as a factor distorting the choice of goods within the bundle. Bundling, like tying, end-product royalty agreements, and related contractual methods, including exclusive dealing and full-requirements contracts, may have anticompetitive effects in particular settings, but not in general; and so the main effect of banning tying and bundling would be merely to increase the cost of engaging in price discrimination. And remember that price discrimination is not in general unlawful, which means that firms engage in tying or bundling when that is the cheapest or most effective method of discrimination. To the extent that prohibiting these practices leads not to a reduction in discrimination but merely to an increase in the cost of discrimination, the prohibition imposes a net social cost.

But again an exception must be made for the situation in which network externalities are an important competitive factor. For the bundle like the blanket license or the end-product royalty reduces the customer's incremental cost to zero, which makes it hard for sellers of a single product to compete. The price of the bundle includes its components, each one of which is therefore "free" to the customer in the (crucial) sense that he won't save any money if he rejects it in favor of a component that is sold, necessary at a positive price, by a single-product company. The latter will therefore have trouble gaining a foothold in the market.

Such special cases to one side, it appears that antitrust law is imposing excessive restrictions on the licensing of intellectual property. The effect of those restrictions, combined with the high transaction costs inherent in the licensing of intellectual property, is to prevent the maximally efficient allocation of IP resources.