AUTONOMY AND INDEPENDENCE: THE NORMATIVE FACE OF TRANSACTION COSTS

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Not everyone believes in the desirability of Intellectual Property (IP) rights for individual creators, but almost everyone believes that even when these rights make sense the cost of moving them around is a major headache. One aspect of anticommons theory is the observation that the cost of assembling and aggregating property rights (including IP) is an important and often hidden downside of the logic of individual ownership. Put simply, no one has much of a good word to say about transaction costs. I begin with the conventional point that sometimes the benefits of disaggregated production of IP-covered works are worth the cost. But then I go further and argue that the benefits of individual autonomy and small team production are substantial enough that, in some cases, society ought to encourage this type of production even when the net measurable costs of this arrangement are slightly negative. Transaction costs, in other words, are sometimes the byproduct of production arrangements that serve important normative values (autonomy and independence, for example), and when this is so they ought to be tolerated.

INTRODUCTION

Anticommons theory made a splash, and is today being expanded and applied, because it shifted our collective attention in a crucial way. Before the 1990s, the big policy questions in IP were all about individual IP rights: when should a copyright or patent be granted, when denied? Anticommons theory burst into this conventional conversation like an unruly drunk at a ballet recital. It demanded attention. It said, in effect, "You may mean well, but you're missing the big point. You're wasting your time!" The big point is not the individual grant of an IP right. It is the *aggregate impact* of granting many rights to many discrete and independent right-holders. It is the cumulative effect of all the transactions necessary to pull these disparate rights together into a useable bundle. That is where the action is now, and it was anticommons theory that said so most clearly and most convincingly.

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The theory's big splash has produced a pushback in the form of empirical studies looking for evidence of the anticommons dynamic.[1] Though it is in the early days for this sort of study, the quick move to test the theory speaks volumes about its impact. These studies raise some interesting points, which I address later in this Essay. My main thrust however is elsewhere. What really intrigues me about anticommons theory is what it means to the normative foundations of IP law. How does the shift I identified—from the grant of a single right to the system-wide impact of many rights—affect our understanding of whether IP law is a good or bad thing for society? How does a renewed interest in transaction costs affect our beliefs about fundamental policy issues in the field? And finally, how does anticommons theory translate into specific, granular policies, such as what to do about the fair use doctrine in copyright, or how far patent law should encourage patents on genes and proteins? These are the sorts of topics I take up here.

I. IN THE BEGINNING . . .

In the beginning—before IP rights—there were no transaction costs. Or at least very few. According to one conventional history of creative labor, creative people were concentrated in the courts of kings or other rulers, or perhaps in collectives such as monasteries or churches. People who could make use of an invention (such as a siege machine, courtesy of Leonardo) or a musical composition (such as a fugue, courtesy of Bach), or the like, were connected to the same central hub as the creative people themselves. Very little effort, and almost no thought, was given to the problem of moving creative products from those who made them to those who would use them.

Into this void stepped a new set of practices, and with them, an idea. At times, creative people chafed at some of the constraints of centralized control.[2] The very thing that made it easy to move creative work from makers to users irritated the creators. Put simply, some of them did not like having a direct, all-powerful boss. They wanted more of a say over how many works they would produce, and even the types of things they would work on. What they wanted, in a word, was autonomy.

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1. *See, e.g.*, Fiona Murray & Scott Stern, *Do Formal Intellectual Property Rights Hinder the Free Flow of Scientific Knowledge? An Empirical Test of the Anti-Commons Hypothesis*, 63 J. ECON. BEHAV. & ORG. 648 (2007) (finding a very modest anticommons effect); John P. Walsh, Ashish Arora & Wesley M. Cohen, *Working Through the Patent Problem*, 299 SCIENCE 1021, 1021 (2003) (stating, after interviewing seventy pharmaceutical and biotechnology companies, that "almost none of our respondents reported worthwhile projects being stopped because of issues of access to IP rights to research tools").

2. Samuel Johnson is a famous example. *See* Robert P. Merges, *The Continuing Vitality of Music Performance Rights Organizations* 9–10 (Univ. of Cal. Berkeley Sch. of Law, Working Paper No. 1266870, June 11, 2008), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1266870 (reviewing Johnson's unhappy view of patronage); *see also* Paul David, *Common Agency Contracting and the Emergence of "Open Science" Institutions*, 88 AM. ECON. REV. 15, 18 (1998) ("Patron-client relations often were precarious, being uncomfortably subject to the volatility of aristocratic tastes and moods, and to the abrupt terminations that might ensue on a patron's disgrace or demise.").

According to our story, IP rights filled this need. First patents, then copyrights, came to be assigned to individual creators. These rights took on different formal attributes—privileges from the crown, state-backed monopolies, and the like. But they shared an important attribute. They gave the individual creator a right to prevent all others from illicitly reproducing a given creative work. They were "good against the world." In this crucial sense, they were property rights.

Property rights allowed creative people to break away from the centralized structures that had been their only option in former days.[3] Now, an author or inventor could (in theory, at least) interact directly with his audience or customers. The centralized bond between makers and users had been cut; but so too were the ties that bound a creator to the power of a single person or entity. In place of a single, centralized authority and the connections this entailed, there were now multiple but direct connections between those who made a creative product and those who used it.

For consumers, this was revolutionary. No longer were books and music and even technology subject to the caprices and politics of a ruling elite. Makers of creative works were now subject directly to the demand of all those who might enjoy (and could afford) them. Though elites continued to shape culture in many ways, it was also true that collective demand from average consumers—the early seeds of "pop culture"—was a major new force on the cultural scene.

II. INDEPENDENCE, SPECIALIZATION, AND INTEGRATION

The world is a lot more complex than this, of course. But there is also something quite true in the stylized story of property rights replacing patronage. From the perspective of creative people, the key point—the major change—was this: property rights introduced a measure of *autonomy* that was absent in the age of patronage. In some cases at least, property rights over creative works allowed a creator to detach from the patronage structure and "go it alone." The direct connection with the audience or consumers gave the creator more freedom, more control.

The opening of a mass market—made possible by the direct creator–consumer link fostered by property rights—significantly increased market size. This in turn changed the division of labor in the creative industries. From the point of view of economic theory, there was greater *specialization*. Patrons were few in number, and their tastes were fairly homogenous. The mass market brought far more opportunities for creative people to make a living. Some who would have been amateurs or part-time creators now had their chance: they could try to make a go of a career in the creative industries.

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3. *See* Paul Goldstein, *Copyright*, LAW & CONTEMP. PROBS., Spring 1992, at 79, 83 ("Consider for a moment the effects of patronage—whether from the Renaissance princes or the United States Congress' modern Medicis. Patronage supports only those authors whose creative efforts meet the patron's taste. Patronage depresses authorship by shutting the author off from the wider audience that he might hope to reach.").

Two examples might help illustrate the point. Until the early nineteenth century, composers could make a living exclusively as courtiers to wealthy patrons, or as employees of a church. The expansion of music copyright opened up new possibilities. The economist F.M. Scherer has documented in detail how composers began to break away from these centralized structures, and in so doing invented a new force on the cultural landscape—the independent composer.[4] Scherer gives the example of Giuseppe Verdi, who quickly learned to exploit the profit potential from stronger copyrights by, for example, ramping up the sale of sheet music in regions where his operas were performed. Scherer also shows that entry into the field increased as well during this period.

A second example comes from patent law. In the mid-nineteenth century, innovations in the railroad industry were almost always developed in-house at the large railway companies. Though patents were available, these companies rarely pursued them, choosing instead to profit from them through a combination of secrecy, internal cost-savings, and mutual advantage from open sharing. Then along came a group of unaffiliated "outside" inventors who began to aggressively use patents to commercialize and profit from their inventions. Though there was resistance to some of the new tactics, a number of innovative firms rose up this way, most notably the Westinghouse company.[5] Originally founded to capitalize on George Westinghouse's innovations in air brakes, the company went on to become an important player in developing inventions for the railway industry. Though there are a number of interesting aspects to the railway invention story, my point here is simply this: patents permitted a specialized R&D-intensive firm to enter an industry that had been, for the most part, content to innovate only in the context of large, vertically integrated railway lines. In other words, patents encouraged specialization.

A. Enter Transaction Costs

So far we have a simple story. Property rights encouraged specialization by creating a market that had not existed before. This encouraged people to specialize in creating works for this market: a classic case of specialization increasing with "the extent of the market" (Adam Smith), or with overall economic growth (George Stigler).[6]

I think this Smith–Stigler formulation does a good job of explaining, at a general level, some features of the market for creative works.[7] One advantage of this economic narrative is that it invites application of a well-known extension of the Smith–Stigler model. The simple story of ever-expanding specialization was

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4. F.M. SCHERER, QUARTER NOTES AND BANK NOTES: THE ECONOMICS OF MUSIC COMPOSITION IN EIGHTEENTH AND NINETEENTH CENTURIES (2004).

5. *See generally* STEVEN W. USSELMAN, REGULATING RAILROAD INNOVATION (2002).

6. *See* George J. Stigler, *The Division of Labor is Limited by the Extent of the Market*, 59 J. POL. ECON. 185 (1951) (quoting Adam Smith).

7. *See, e.g.*, Ashish Arora & Robert P. Merges, *Specialized Supply Firms, Property Rights, and Firm Boundaries*, 13 INDUS. & CORP. CHANGE 451 (2004); *see also* Dan L. Burk, *Intellectual Property and the Firm*, 71 U. CHI. L. REV. 3 (2004); Paul J. Heald, *A Transaction Cost Theory of Patent Law*, 66 OHIO ST. L.J. 473 (2005).

challenged in the twentieth century by a number of economists whose field came to be known as "the theory of the firm." Think Coase, Oliver Williamson, and a long list of fellow travelers. The key contribution of this new theory was a set of tools to better understand when specialization made sense and when, by contrast, vertical integration would win out. We know these tools by the general moniker of transaction costs. The basic idea was simple (but—or, therefore?—powerful): specialization wins out when cost savings from more efficient production are not wiped out by the increased costs that come with breaking production up and sharing it among multiple firms. Put another way, to effectively evaluate the benefits of specialization in any particular case, we must consider not only the gains from specialization, but also the *costs*.

The gains from specialization are easy to see in the examples of composers and railway inventors. Independent creative people, unbeholden to politicized patrons or industrial bureaucracies, have more control over their work. This is generally thought to be a boon to many types of employment; it is easy to see why it might be especially true of creative types of work.

Specialization's costs, on the other hand, may at first be less apparent. The key is to recognize that prior to specialization, the work of a creative person is unobtrusively integrated into a larger economic unit or product. Because the patron controls the composer as a quasi-employee, an explicit contract or transfer between composer and patron is unnecessary when the patron orders a performance of the composer's music. Likewise, a railway company is free to use employee-produced inventions at any time. Because the inventors are employees, the railway owns outright all their inventive output; no specific contract or transfer is required for the railway company to use a particular invention.[8]

Once musical compositions are detached from the integrated unit of the palace court, and once railway inventors are detached from integrated railway firms, all this changes. Then, composers and inventors operate as independent economic agents. Former patrons, like other consumers of compositions, must enter into an explicit deal if they want to obtain the right to perform a composition. The same with a railway company: railroad-related inventions that would have been available without a specific deal if made in-house, now must be obtained in an arm's length transaction with an independent inventor. In each case, specialization comes at a cost. The consumer of a creative work must now bear the cost of an additional contract or transfer. An input that had been produced in-house must now be purchased. A new element has entered the story: transaction costs.[9]

1. Transaction Costs: Some Normative Considerations

Speaking strictly in economic terms, there is nothing inherently superior about integrated versus disaggregated production. Net cost is all that matters—

8. This is, of course, what Oliver Williamson would term hierarchical, as opposed to contractual, governance. *See* OLIVER WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM (1985).

9. For more on this scenario, see Robert P. Merges, *A Transactional View of Property Rights*, 20 BERKELEY TECH. L.J. 1477 (2005). *See also* Arora & Merges, *supra* note 7, at 452–55.

whether, when transaction costs are added to the mix, disaggregated production with independent producers costs less than integrated production. The benefits of independence, from this point of view, are reduced to economic terms. Typically, they revolve around greater concentrated effort on the part of independent producers. Williamson calls this "high-powered incentives," by which he means the greater effort that can be expected when an independent producer makes an input and then sells it, via contract, to a buyer who uses it in some larger production process. The idea is that the same input will be made with greater care when it is produced by someone who has to sell it via contract. Part of the story is that an explicit contract can spell out quality and cost criteria with greater precision than the more informal, bureaucratic process by which one unit in a large firm acquires inputs from another unit in the firm. But another part—the important part, for our purposes—is that an independent producer will work harder and with greater focus. Again, from a strictly economic point of view, this is desirable only because it leads to lower net production costs (assuming, of course, that the higher transaction costs of independent production are outweighed by improvements in the quality of the input or lower costs). There is nothing inherently *better* about independent input production.

But from a slightly different perspective, independent production *is* inherently better. I want to build on this different perspective, and move toward an argument about the normative—as opposed to strictly positive, efficiency-related—implications of transaction costs. The idea is straightforward: if independent production serves important social values beyond efficiency, then we might consider bearing slightly higher transaction costs than might be dictated by a strictly efficiency-based viewpoint. Put differently, we might be willing to accept higher transaction costs if they are shown to serve an important social purpose. Which means, of course, accepting that independence has distinct value, in and of itself, apart from its contributions to efficiency.

But is there any reason to think this? *Why* might independence have separate value?

The answer usually given—and it has come from a variety of viewpoints and academic fields—is that people who own their own business and make a product have a greater sense of autonomy than employees. Someone who makes and sells something is said to have greater pride, more self-esteem, more of a say over his or her destiny. The antitrust literature (particularly from an earlier era) often expressed this negatively, through the dogma that "big is inherently bad." So for some, the entire purpose of antitrust law is to maximize the number of small(er), independent producers.

In political philosophy, this sentiment has been the animating force behind arguments in favor of more extensive small-scale ownership and production.[10] This seemed to be one virtue of the "yeoman farmer" so well celebrated in the writings of Thomas Jefferson.[11] Others have expressed similar

10. *See, e.g.*, JEREMY WALDRON, THE RIGHT TO PRIVATE PROPERTY (1988). *See generally* D. Benjamin Barros, *Property and Freedom*, 4 N.Y.U. J.L. & LIBERTY 36 (2009).

11. Robert P. Merges, *The Concept of Property in the Digital Era*, 45 HOUS. L. REV. 1239, 1253–55 (2008) (summarizing Jefferson's support for small property holders as

sentiments. John Locke contrasted "free labor" and the ownership of resources that accompanied it with the subservient state of the slave or hired hand. Immanuel Kant also saw a tight connection between the ability to own resources and a strong sense of economic and political autonomy. And Jeremy Waldron, in his comprehensive book on property ownership and political philosophy, attributes to G. F. Hegel the idea that widespread ownership of productive resources brings great personal and societal benefits.[12]

We hear echoes of these ideas in contemporary calls for a "stakeholder society," or in proposals that promote "ownership" in various forms as a prescription for satisfying work lives and deeper commitment to society.[13] In each case the basic notion is the same: devolving productive resources out of large, centralized structures and into the hands of many small-scale owners, brings significant benefits and serves important values. Transaction costs are implicitly treated as a necessary side effect of these benefits. It is the implications of this notion for IP policy that I want to pursue here.

2. Autonomy and Specialization

I want to be clear about what I mean by autonomy in this discussion. The etymology of the word gives strong clues about the normative point I am making: it means, literally, self rule. Autonomy gives a person control over his life: what he can do as a career, what aspects of his job he will emphasize, and when and how he will work.

Taken literally, autonomy is a strictly individual matter. It applies only to the single person. I am using it a bit more loosely here. I recognize that creative work is only sometimes done on a strictly solo basis. For every novelist or one-person recording studio, there are many *teams* of people working together to create all sorts of works typically encouraged and protected by IP rights—inventions, movies, musical works, etc. For my purposes, autonomy increases not only when single individuals are able to make a go of a creative career on their own, but also when small teams can do so. By "small" here, I mean small in comparison to large, vertically integrated economic units. Each member of a small team usually has more say over working conditions and creative decisions, so in this sense small teams promote a greater degree of autonomy.

B. The Benefits of "Propertizing Labor"

An economist would say that the extension of property rights to creative work creates a market for that work, or perhaps enhances such a market, making it more viable. The normative perspective I am taking adds something to this. IP

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the backbone of democracy); *see also* GREGORY S. ALEXANDER, COMMODITY AND PROPRIETY: COMPETING VISIONS OF PROPERTY IN AMERICAN POLITICAL THOUGHT 1776–1970, at 32–33 (1997) (quoting Jefferson to this effect).

12. These issues are treated in depth in Part I of ROBERT P. MERGES, JUSTIFYING INTELLECTUAL PROPERTY (forthcoming 2011).

13. *See, e.g.*, JEFFREY R. GATES, THE OWNERSHIP SOLUTION: TOWARD A SHARED CAPITALISM FOR THE 21ST CENTURY 50–67 (1999) (advocating public policies that favor greater employee ownership of companies).

rights contribute to the possibility of independent creative work—to autonomy for creative people. In this section I want to talk about one aspect of this increased autonomy, which I call "the propertization of labor."

IP rights turn creative *work* into creative *assets*. This is what I mean by propertization. There are two dimensions to this change. One is economic: an asset is capable of producing revenue even when the person who made it is not working. A musician can perform a song and get paid once; but if the song is recorded, the musician can, in theory, be paid many times. Likewise with other sorts of creative labor. Propertizing the labor converts it from a one-time offering of services into something with the potential for earnings over an extended time—an asset.

The other aspect of propertization is related, but goes beyond the strictly economic. A legal regime that permits an act of labor to be embodied in a saleable asset confers a extra measure of dignity on that labor. It is, in a sense, a *privilege* for one's labor to be converted in this way. The law, by allowing labor to be propertized, dignifies that labor in some important way.

It is interesting that the language of IP law reflects this idea. By tradition, payments made to an IP owner are called "royalties." While the origins of this usage seem lost to us, the term suggests that some of the prestige of the sovereign rubs off on the owner of a creative work.[14] It connotes deep respect for a work and, by extension, the author or inventor who created it. Also, IP rights are "granted" by the state—a term that suggests the transfer of some small portion of the state's legitimacy and power to the individual creator of a work.

This habit of talking about royalties and grants perfectly illustrates the point I am trying to make: by converting a creator's payment from a mere wage to a royalty, and by speaking as though some of the state's authority was infused into the legal right to a creative work, the law implicitly plucks the creator out of the humdrum world of wage earners and everyday citizens, boosting him onto a higher plane altogether.

The crucial point is the role of property rights in all this. A work subject to property rights dignifies the accompanying payment with the label "royalty." The grant of rights over the work from the state is an indication of status that demands this exalted treatment. So while from one perspective, the decision to grant a right "good against the world" turns solely on incentives for creativity and enforcement costs, from another perspective it carries an enormous honor. Property, after all, confers the power of the state on an economic asset. The state apparatus of courts and the like can be invoked to defend and protect an asset if it carries the label of property. Put another way, we assume that society does not lightly permit an owner to employ the state in enforcing the owner's rights against a total stranger, a person with whom the owner may have no relationship and no legal privity. This privilege, presumably given because of merit and importance, carries with it an imprimatur of status and approval.

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14. Thus: "[Royalty in the] [s]ense of 'prerogatives or rights granted by a sovereign to an individual or corporation' is from [the] late 15[th] c[entury]." *Definition of Royalty*, ONLINE ETYMOLOGICAL DICTIONARY, http://www.etymonline.com/index.php?search=royalty&searchmode=none (last visited Feb. 14, 2011).

This notion of property as a mark of distinction adds something important to the discussion of transaction costs. Viewed in the light of the autonomy and dignity that comes with propertization, higher transaction costs may well look different than other costs. These costs come, in a sense, with some hidden benefits that we might not have been able to see before. Increased autonomy and greater authorial dignity may provide some social value apart from whatever efficiency gains might result. Indeed, even when the efficiency effects of granting IP rights are ambiguous, or perhaps even slightly negative after transaction costs, dignity might provide a reason to grant the rights anyway. So before we criticize the added transaction costs accompanying more extensive IP rights, we need to consider the dignity issue. Some added costs, which seem pointless when efficiency is the only concern, may be justified when this extra dimension is taken into account.

III. TRANSACTION COSTS: HOW MUCH IS TOO MUCH?

At the limit, my argument implies that no transaction costs are too high when a property right could add even marginally to an owner's sense of dignity. This is, of course, ridiculous. It is not enough to say that an IP right *is* a right; like all rights, they must fit into a larger framework of rights and duties. If IP rights were completely at odds with overall efficiency, they would not have much of a place in a dynamic socioeconomic system. The burden is, therefore, on me to describe when the added dignity of a property right is worth it, from the larger social perspective I have been describing—when, in other words, the added transaction costs are not so egregious that they dwarf whatever autonomy–dignity benefits might come with the awarding of rights.

A. Some Legal and Practical Considerations

To put the foregoing bluntly: I am going to argue that transaction costs are not always bad. Or at least, slightly higher transaction costs might sometimes be worthwhile because of what they purchase.

I will return to the important themes of autonomy and dignity near the end of this paper. Now I need to move to a deeper treatment of transaction costs: where they arise in the IP system, how they are typically mitigated, and how high they can be relative to the overall value of IP-based works. We have to fully understand the transaction cost landscape if we are to meaningfully decide when higher transaction costs are worth the cost.

1. Efficient Modularity: The Great Ideal

It often helps to start simply. So we can begin our inquiry into modularity with a simple story.[15]

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15. Readers familiar with the literature on modularity and property will no doubt find here echoes of some prior work, in particular, Richard N. Langlois, *Modularity in Technology and Organization*, 49 J. ECON. BEHAV. & ORG. 19 (2002); Henry E. Smith, *Institutions and Indirectness in Intellectual Property*, 157 U. PA. L. REV. 2083, 2088–91 (2009); Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 YALE L.J. 1742, 1784–98 (2007). *See generally* MANAGING IN THE

Different sorts of products are protected by IP rights. Some of these can be "decomposed" into subparts. Of these decomposable products, some are best made by a single, integrated entity; others, or parts of others, are best made by an efficient dispersed group of entities. When dispersed production makes most sense, a market—an efficient market—for the various parts of the product will arise. Because works traded in this market are backed by IP rights, we will call this "the market for IP inputs." According to the story, this market will arise only when it is needed, and will be, by definition, highly efficient. To push the story even further, we can add a political economy dimension: those who would prospectively benefit from this market will help call it into being by backing legislation that defines IP rights over inputs. The ideal form of this legislation would even calibrate the "granularity" of the IP rights, so that rights are granted only over inputs best produced by dispersed units, and only in bundles or property specifications that are worth the transaction costs of transferring them.

2. Automatic Pre-Assignment Rules: Evidence of Optimal Modularity?

There is in fact limited evidence that the legal system has, in some ways, tried to approximate this goal. This is best illustrated by a set of rules that govern employer ownership of employee-generated IP. Under the "work for hire" doctrine in copyright, and related principles from patent law, the law automatically assigns ownership to employers in certain situations.[16] This area has often been studied from the perspective of employee–employer power relations, and this is surely part of what is involved. But transaction costs play a role, too, I believe. So, for example, computer programmers employed by a common employer and contributing to a large, jointly created work (such as an operating system or application program) would be subject to the work-for-hire doctrine. The products of their creative work are pre-assigned to the employer; in the words of the Copyright Act, the corporate employer "is considered the author" of those works.[17] The same is true of patents in these situations: an employer automatically owns inventions made by most employees. In each case, ownership rules are structured so that contributors to a group product are disabled from claiming individual property rights over their individual contributions. This obviously conserves on transaction costs, and in the process preserves the integrity of the group product.

Employer ownership rules make sense for group products. It is no coincidence that large-scale enterprises with many employees specialize in these products. On the rare occasion when a big company is not engaged in such a large-scale, inherently "group-produced" product, employers can override these default ownership rules with contracts. There is an inherent logic at work here: for the multi-component products that large companies specialize in, these rules

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MODULAR AGE: ARCHITECTURES, NETWORKS, AND ORGANIZATIONS (Raghu Garud, Arun Kumaraswamy & Richard N. Langlois eds., 2003).

16. This section draws from Robert P. Merges, *The Law and Economics of Employee Inventions*, 13 HARV. J.L. & TECH. 1 (1999).

17. 17 U.S.C. § 201(b) (2006).

automatically integrate disparate contributions, preempting any potential transaction-cost difficulties.[18]

What if, as things develop, the savings in transaction costs are not worth it because, for example, in-house production carries the wrong incentives? In other words, what if works are being produced in-house, but disintegrated production would in fact be superior? This is easily accommodated. Assuming property rights are available over the relevant works, a shift in the locus of production is accompanied by a shift in ownership. The classic example comes from the early days of the motion picture industry. Originally, film companies were based around technology; competing film recording and projection technologies were championed by different companies. The actual films that were shown—the "content"—were thought of as commodities. For example, Thomas Edison's company employed a small army of directors, actors, and other production personnel. The content was churned out according to largely traditional formulae, often derived from Vaudeville. Its main purpose was to fill two or three minutes of film time, and round out the roster of offerings, thereby encouraging widespread use of Edison's film technology. A true "work made for hire" arrangement.[19]

Subsequently, when film production was "disintegrated" by the rise of the independent director, film studio executives had to adapt to the higher cost of obtaining high-quality content. The temperamental director, and today, the spoiled and pampered "talent" (actors, screenwriters, etc.), have no doubt caused many an executive to rue the day the film studios gave up direct control over film production. But the current structure seems robust to the higher transaction costs that come with it. The reason is clear: films are much better when made this way. The lesson of the early film industry was that the kind of creativity needed to make an interesting film was less likely to come from an employee than a free agent, an independent director or writer. In this case at least, the increased hassle of dealing with independent creators is unquestionably worth the cost.

To summarize: automatic assignment rules work well when (1) numerous creative workers contribute discrete works that (2) have no independent use or value, or at least are far *more* useful or valuable when integrated into a larger aggregate product. In this setting, serious inefficiencies would follow if the law allowed each contributor to retain property rights over his individual work. At the same time, if integrated production becomes less efficient, property rights will enhance the viability of independent production. Transaction costs may rise, but increased quality might offset the higher costs.

3. Alas . . .

Being a fan of IP markets and other institutions for integrating discretely owned IP rights, I am predisposed to go where this story is leading—toward the

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18. *See* Dan L. Burk, *Intellectual Property and the Firm*, 71 U. CHI. L. REV. 3 (2004); Merges, *supra* note 16.

19. *See* Alexandra Gil, *Breaking the Studios: Antitrust and the Motion Picture Industry*, 3 N.Y.U. J.L. & LIBERTY 83, 91 (2008). On Edison's entry into cinema and the early structure of the film industry in the United States, see CHARLES MUSSER, THE EMERGENCE OF CINEMA: THE AMERICAN SCREEN TO 1907, at 55–90 (1994).

conclusion that IP rights enable a highly efficient, maybe even optimal, set of productive arrangements. But even I know it is not always an accurate depiction. Sometimes, we observe an IP market that is *necessary* because of prevailing legal rules, but is still not particularly *efficient*, let alone optimal. The reason is simple: property rights are not always defined efficiently, and markets are agnostic. Rights may be granted that make little sense economically, or they may be enforced in such a way that undermines efficiency. Markets, meanwhile, will form wherever there are gains to be had on both sides of a transaction—even when the transaction itself is not optimal, or even particularly efficient. We must not mistake the existence of a market for IP as a sign that optimality, or even a high degree of efficiency, has been reached.

B. A Pointless Market

Let me illustrate. My case study will be the market for patent rights asserted by rent-seeking companies whose primary business is not innovation but patent litigation.[20] In the IP vernacular, patent trolls. Litigation settlement agreements between these companies and real operating companies, often true innovators, are not a sign that inventive activity is taking place at the correct locus, or that ownership rights have flowed into the optimal hands. The "market for settlements" exists because it solves a headache to which operating companies have become accustomed. It is by no means a sign of optimal anything, or even efficiency. There is a role for the independent inventor in a complex economy, and independent patent enforcement entities may have a place in a productive ecosystem involving independent inventors and large operating companies. But companies that funnel very little money to researchers and inventors, and that specialize in finding the best holdup opportunities, do not well serve the interests of legitimate small inventors or of society in general. So the market for legal settlements is not an indication that all is right. It is a necessary evil, perhaps, but certainly not an indication that research has been appropriately allocated to independent creators in the relevant industries.

To reiterate the point: while markets can signal that disintegrated production is taking place and that efficiency is being served, this is not always the case. Sometimes poorly specified property rights mean only that rational business people have figured a way around an inefficient and unproductive roadblock. Nothing more.

C. A Closer Case

Now let us address a tougher case. Sometimes, rights will be granted and markets will form, and it is very difficult to figure out if the result is efficient or not. In these cases we may invoke the values of authorial autonomy and dignity as tie-breakers that can help determine proper policy.

Here is an example of such a close case. Individual musicians in Europe have a property right over their discrete contributions to a group musical work.

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20. *See generally* Robert P. Merges, *The Trouble with Trolls: Innovation, Rent-Seeking, and Patent Law Reform*, 24 BERKELEY TECH. L.J. 1583 (2009).

This "performance" right is separate from the copyright held by the composer of a musical work. This right permits musicians to share in the royalty stream of recorded performances. The right was added to national copyright laws at different times beginning in the 1980s; Britain, for example, adopted full-scale performers' rights in 1988. The new right was adopted in part to increase musicians' salaries; because it creates an ongoing royalty stream from what had been merely a one-time performance, it is an excellent example of the "propertization of labor" mentioned earlier.

So much for theory. In practice, the musicians' public performance right does not seem to yield much net economic gain for the average musician. According to an authoritative study from the early years of the right in Britain:

> [T]he amounts [earned] can make only a marginal impact on artists' earnings even over a 50 year period (assuming the recording was in use for so long). The incentive value of this change in the law for the majority of performers must, therefore, be doubted. On the other hand, it will increase transactions costs of collection and distribution of royalties and also the costs to users. These costs could possibly raise the price for the final product. The evidence therefore raises questions about the value of legal intervention to raise the earnings of performers, specifically whether the [new legislation] could be said to assist them; I maintain that it cannot.[21]

What do these examples add to the discussion so far? Each adds something different. The patent troll story adds a couple of cautionary notes (a cautionary chord?): (1) exclusive rights must be matched with socially valuable assets if they are to serve a valuable social function; and (2) therefore the existence of a market for *rights* does not guarantee any beneficial contribution to economic activity. Only if those rights are specified properly will this market enhance efficiency. Put another way, the existence of a market does not mean economic activity has been effectively modularized, or indeed that anything valuable is happening at all.

The second example, musicians' performance rights, teaches something else: even when rights are granted over an asset with real economic value (in this case, the performance of each musician), the additional transactions that are necessitated may or may not be worth the extra cost. To see this, let us accept as a given that the total transaction costs of dealing with all those extra performance

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21. Ruth Towse, *Copyright and Economic Incentives: An Application to Performers' Rights in the Music Industry*, 52 KYKLOS 369, 386–87 (1999); *see also* RUTH TOWSE, CREATIVITY, INCENTIVE AND REWARD: AN ECONOMIC ANALYSIS OF COPYRIGHT AND CULTURE IN THE INFORMATION AGE (2001); Ruth Towse, *The Singer or the Song? Developments in Performers' Rights from the Perspective of a Cultural Economist*, 3 REV. L. & ECON. 745, 762–63 (2007) (stating that "the jury must remain out" on the question of whether performance rights make a net welfare improvement for musicians). *See generally* Martin Kretschmer, *Artists' Earnings and Copyright: A Review of British and German Music Industry Data in the Context of Digital Technologies*, FIRST MONDAY, Jan. 3, 2005, http://firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/viewArticle/1200/1120 (stating that musicians generally and on average do not profit much from their copyrights).

rights exceeds the income gain for musicians, taken collectively. To revert to a strictly economic view of things, this would presumably be the end of the analysis: the right would make no sense, and it would follow that it should be scrapped. The only potentially confounding consideration might be that transaction costs could fall over time. *If* it could be shown that this was a possibility, it might make sense to keep the right in place for some period of time. Recognizing the dynamic process of institutional formation and technological innovation might pay dividends. If, on the other hand, no reasonably foreseeable technology could be anticipated, it would only make sense to scrap the right.

Putting aside the possibility of falling transaction costs, we are left with a stark question: would the enhancement of autonomy and dignity I have been arguing for really be worth the added transaction costs? Could we really justify an admittedly welfare-inferior setup on the basis that it made independent musicians somehow *feel better*?!

If you have read this far, you will not be a bit surprised at my answer: yes. The relevant question then becomes, how far are we willing to go in this direction?

1. Capping the Autonomy–Dignity Premium

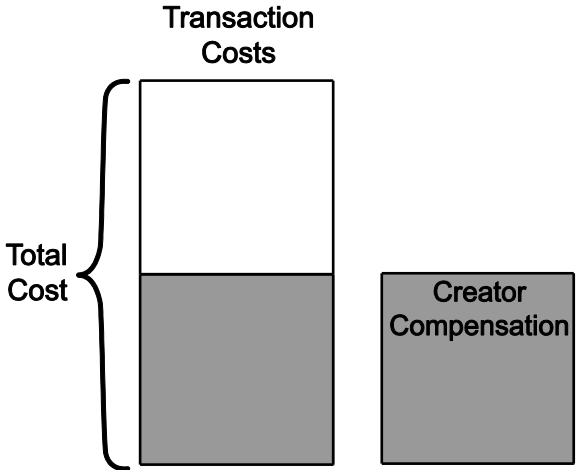
The trick is to go just far enough to give full credit to the idea of a property right, without going so far as to severely undermine economic efficiency. Just far enough, in other words, but not too far.

That is obviously a less-than-scientific standard, and the burden is therefore on me to say something concrete about it. I try to do that in the next subsection.

a. Staying Away from the Extremes

What we want to avoid is granting property rights that bring some benefit to creators, but that come with transaction costs that substantially exceed the collective benefits. Figure 1 illustrates the situation:

Figure 1



This shows a situation where the added income for creators (one cost of the IP right) comes with very high transaction costs. Total costs, in other words, are very high compared with the added direct benefit. Now consider an acceptable level of costs given creator benefits:

Figure 2

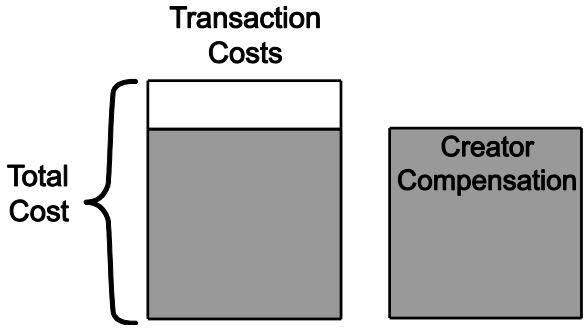
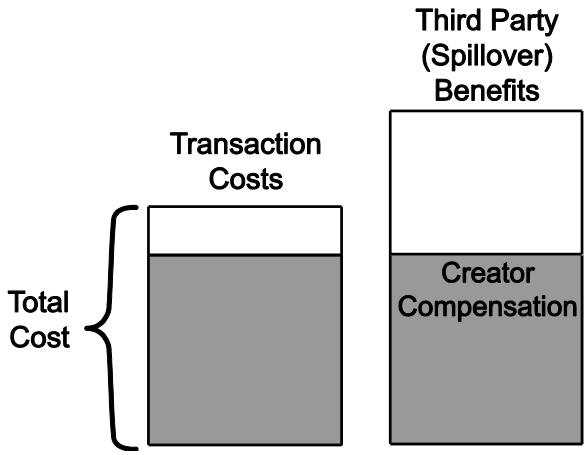


Figure 1 and Figure 2 assume that creator compensation is the only relevant social benefit from the IP grant. For the sake of completeness, it must be recognized that there may also be spillover benefits to third parties. Indeed, third party effects are often one of the primary justifications for IP rights. Figure 3 takes this into account, and shows that sometimes even where transaction costs exceed creator compensation, IP rights might still make sense:

Figure 3



My simple point is that we want to put ourselves in the second situation as often as possible, and avoid the first. If I were to state this as a principle, it might be: support the granting of rights even where transaction costs are significant, and sometimes even where they exceed total creator compensation. Do this especially when significant third party (spillover) benefits are anticipated. Even when spillovers are not a factor, we should *still* grant the rights where they encourage useful activity and where some autonomy/dignity benefits can be expected, and even though the rights may drive net social welfare negative (though not *extremely* negative).

b. Some Rules of Thumb

It is clear enough by now that it is very difficult to be definitive in this matter of rights and transaction costs. There is no simple, sturdy rule that will resolve all problems or produce balance in every situation. The best we can do is to start with some general principles that can help guide our actions in a specific case. These rules of thumb are offered in this spirit.

1. IP rights create burdens, sometimes significant ones. It is often hard to know whether the transactional burdens are worth the benefits the rights bestow. One simple rule is therefore to withhold the grant of rights, or restrict their enforcement, where almost no benefit seems possible. The patent troll case mentioned earlier speaks to this. Patents that are good primarily for use in holdup strategies—those whose strategic value far exceeds their intrinsic value—ought to be withheld. If granted, equity ought to insure that they do not bestow excessive leverage in light of their inherent technological contribution. The same logic applies whenever the vast bulk of an IP right's value comes in the form not of intrinsic merit but of opportunistic leverage. This rule of thumb will and should encourage courts to look carefully into the intrinsic worth of the work covered by an IP right.

2. Where granting rights would create real value, but transaction costs are predicted to be significant, a crucial fact should be kept in mind: it is far easier to waive, under-enforce, or otherwise work around a burdensome IP right than it is for private parties to duplicate (by contract or custom) the benefits of an IP right when no such right is granted in the first place.[22] In other words, a societal decision not to grant an IP right for certain types of works is far harder for private parties to work around. Relatively speaking, it is much easier for private actors to deal with the transaction costs created by an IP right. Put simply: all other things equal, though we ought to avoid creating an anticommons when one is foreseeable, if there are good reasons to grant rights, we ought to be *more* wary of withholding those rights. It is much harder to come up with private solutions to a mistaken policy of withholding rights than it is to remedy transaction costs the rights create.

3. Transaction costs are a fact of life where property rights are involved. It is therefore *imperative* that the state, having decided to grant IP rights, do all it can to lower the transactional drag from those rights. A policy of "grant rights and get out of the way" is naive. The correct policy is to grant rights (when justified), and *then help to facilitate the low-cost transfer of those rights*. This help can come in many forms:

- Remove antitrust barriers to collective action aimed at lowering transaction costs. Creative group solutions are often the best way to lower transaction costs, but an expensive and threatening antitrust review process only adds an impediment to such a solution.
- The administrative agencies responsible for granting IP rights should also take an active interest in the efficient transfer of those rights. Promoting and encouraging "best practices" in the formation and administration of IP clearinghouses, group licensing efforts, standard-setting and IP pooling arrangements, and even technological solutions or aids to rights-clearing bottlenecks (DRM systems and the like) should be part of the core mandate of IP-related administrative agencies.
- Careful attention to the post-grant environment for IP rights should be a concern not only for administrative agencies, but

22. For empirical evidence on extensive underenforcement of patents in biotechnology, see John P. Walsh, Charlene Cho & Wesley M. Cohen, *Science and Law: View From the Bench: Patents and Material Transfers*, 309 SCIENCE 2002 (Sept. 23, 2005) (survey of 414 scientific researchers showing that patents have little effect on transfer of materials and information between biotech researchers). For discussion of extensive nonenforcement of copyrights in the online context, see Merges, *supra* note 11, at 1267 (noting the widespread waiver of copyright, especially by amateur content creators, online), and Tim Wu, *Tolerated Use* (Columbia Law & Econ. Working Paper No. 333, 2008), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1132247 (suggesting that widespread technical infringement online is, in effect, creating an "opt-in" copyright system where right holders must take affirmative steps to pursue infringers in order to secure and protect their rights; the default situation is, therefore, that infringement is presumed to be tolerable).

> also for courts. Courts should be sensitive to the use of IP rights in holdup or rent-extraction strategies, preventing this whenever possible. In addition, reliable mechanisms for thinning the volume of extant rights—such as orphan works provisions, patent reexamination, and more rational IP right renewal fee schedules—ought to be encouraged and liberally applied.

CONCLUSION

Unfortunately, it is often unclear in advance what the "optimal level of modularity" is for a given type of work. For example, consider a single hand-drawn picture of an original cartoon character. It is difficult to tell in advance whether it will be more valuable as a stand-alone drawing best exploited through the sale of posters; as the basis for a character in a comic book, TV series, or movie; or whether its highest value will be in some other use altogether.

One solution to this problem is to shape a policy that encourages vertical integration in the production of cartoon drawings. This works well if the character is best exploited in a large, composite work or series of works that require many hands to produce—an animated movie or TV series, for example. If in addition there is a market for individual works, the large integrated company that owns the rights to the drawing can move into that market as well. Or perhaps it will license specialized firms in these submarkets. This is no problem, because it owns the rights to the drawing under the automatic assignment rules I discussed earlier.

The downside—and it is a big one—comes in the form of reduced incentives and less autonomy for artists who think up and draw these types of characters. Something valuable is lost when their only viable career option is to work for a large integrated company. Some degree of independence and autonomy is likely to be lost, and something purely economic—the high-powered incentive of being solely responsible for (and able to profit from) a single specialized product—will be lost as well.

Anticommons theory tells us to beware of parsing out rights too finely. That is a good and valuable lesson. Sometimes, as I have argued, IP rights have very little possibility of encouraging any useful behavior. Other times, a modest incentive or autonomy effect will be outweighed by crushing transaction costs. The simple lesson here is this: do not grant IP rights that fit this pattern.

The difficulty is that it is often so hard to *be sure* about what will happen when an IP right is granted. Even if there is some way to predict, generally, the incentive effect, the overall shape of the post-grant environment can be very uncertain. Works covered by IP rights may or may not form inputs for larger, aggregate works. Even if they do, a transactional bottleneck may or may not form in the market for these IP-covered inputs.

Into this world of uncertainty, I am trying to inject some normative ideas. IP rights have the potential to increase the sense of autonomy and the economic independence of creative people. This is a valuable feature of those rights. It ought not be omitted in our analysis, and it might even play a useful role as a tie-breaker in our deliberations. If the readings on the scales of efficiency are a little blurry,

then the added normative boost of an IP right should be used as a thumb on those scales, tipping them in the direction of granting the right.

Grant Gilmore once wrote, "In Heaven there will be no law, and the lion will lie down with the lamb. In Hell, there will be nothing but law, and due process will be meticulously observed."[23] In Heaven, there may be no need for IP rights; creative people will bless the firmament with their works. In Hell, there will be nothing but IP rights, and transaction costs will swallow us all. In these terms, I am arguing here for a kind of IP Purgatory.[24] There will be some rights, maybe many. But transaction costs will be manageable. Creative people will have just a bit more freedom and respect to carry them along as they await their entry into Paradise. Everyone else will benefit from their works, reconciled to the fact that some of what is paid to the creatives is lost in transmission. Some, but not too much.

23. GRANT GILMORE, THE AGES OF AMERICAN LAW 111 (1977).

24. I use Purgatory in the sense Dante did, as a kind of middle place or middle ground. *See* DANTE ALIGHIERI, PURGATORIO (John Ciardi trans., 1957); *see also* HARRIET RUBIN, DANTE IN LOVE 144 (2005) (describing the "invention of Purgatory" by 1300 in Tuscany).