

Essay:
A Transactional View of Property Rights

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Abstract

*Property rights and contract law are two of our most basic legal categories. Many legal scholars describe what makes them different; this Essay describes how they work together to promote economic exchange. Incorporating the insights of both “transaction cost” and “new property rights” economics, it identifies two crucial contributions that property rights make to real-world contracting: (1) **precontractual liability**, or protection for disclosure of sensitive information in the period leading up to contract formation; and (2) **enforcement flexibility** after a contract is executed, in the form of many subtle but important advantages that accrue to a contracting party who also holds a property right. This Essay argues that property’s “transactional” role is growing in importance, as the “new economy” ushers in a more transaction-intensive industrial structure featuring greater numbers of smaller, more specialized firms.*

“I think you can often learn more about how the economic system works by reading law books and cases in law books than you can by reading economics books because you do get descriptions of actual business practices which are difficult to explain.”— Ronald Coase¹

I. Introduction

Property rights and contracts are two of our most fundamental legal concepts. They are usually thought of as freestanding, if not opposed, legal categories. Property rights theorists often invoke contracts for definitional relief: the limitations of contracts in

¹ Quoted in Edmund Kitch, ed., *The Fire of Truth: A Remembrance of Law and Economics at Chicago, 1932-1970*, 26 J. L. & ECON. 163, 193 (1983).

creating legal rights are often contrasted with basic aspects of property rights, to illuminate property's essential features.² From this approach a rich and influential literature has emerged. The "legal entitlements" literature, for example, highlights the significance of differing default remedies – money damages in contracts, injunctions in property. Other writings emphasize the rationale for the limited categories of property entitlements, in comparison with the ability of contracting parties to create almost limitless obligations. With some exceptions, property and contract continue to be analyzed and discussed as opposing concepts and quite distinct legal categories.

This Essay is different. I am interested in an aspect of property rights mostly neglected by legal theorists: how they facilitate contracting. This "transactional" view is more in line with the views of economists who study property rights. These scholars write generally about the role of property rights in structuring bilateral exchange, describing how property rights solve transactional problems that contracts cannot. But the economics literature remains quite sketchy on exactly how property rights function to facilitate transactions. That is the unique domain of this Essay. Here I describe how specific aspects of property law encourage the making of real-world deals. In this sense, I bring a lawyer's eye for detail (sharpened by close attention to the intricate facts of actual transactions), to the economists' models of contracting in the presence of property rights.

A. Brief Review of the Relevant Legal and Economics Literatures

The literature on property rights is approximately as old as law itself. Contracts is not much different. The *relationship* between them, however, is another story. Though even early commentators recognized fundamental differences, not until the pioneering work of Wesley Hohfeld³ did we have a sophisticated understanding of how these basic

² Thomas W. Merrill and Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerus Clausus Principle*, 110 YALE L. J. 1 (2000) (hereinafter, Merrill & Smith, *Optimal Standardization*) ; Thomas W. Merrill and Henry E. Smith, *The Property/Contract Interface*, 101 COLUMBIA L. REV. 773 (2001).

³ Wesley Newcomb Hohfeld, *Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 26 YALE L.J. 710 (1917) (hereinafter Hohfeld, *Fundamental Legal Conceptions*).

legal categories compared. Hohfeld gave us an analytically sound framework that laid bare the essential features of property, contract, and indeed all legal entitlements. This served tolerably well until the 1970s, when a more rigorous application of economic principles swept through legal theory. The pathbreaking conceptual taxonomy of Calabresi and Melamed's article on "Property Rules, Liability Rules and Inalienability"⁴ opened our eyes to a number of fresh problems, especially the question of who is best qualified to place a value on legal entitlements.

Meanwhile, parallel lines of development were underway in economics. Though again even very early writings evince an understanding of property's importance in economic activity, in-depth analysis of the law of property and its economic implications did not begin until the twentieth century. A sociologically-informed group of researchers known as the institutionalists showed interest first. But most economists recognize Ronald Coase as the first economist to get serious about the role of property rights in economic exchange. Beyond question, Coase made foundational contributions in the early days of law and economics, for which he was awarded a Nobel Prize in 1994. Yet the very generality of Coase's vision left open a number of important issues. Coase, for example, understood that property rights were essential to the structuring of transactions. He recognized that prospective parties to a transaction must be able to recognize who has which rights prior to the exchange.⁵ (He also famously postulated that, with zero

⁴ Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972) (hereinafter Calabresi and Melamed, *Property Rules*).

⁵ R.H. Coase, *The Federal Communications Commission*, 2 J.L. & ECON. 1, 14 (1959):

[I]f no property rights were created in land, so that everyone could use a tract of land, it is clear that there would be considerable confusion and that the price mechanism could not work because there would not be any property rights that could be acquired. If one person could use a piece of land for growing a crop, and then another person could come along and build a house on the land used for the crop, and then another could come along, tear down the house, and use the space as a parking lot, it would no doubt be accurate to describe the resulting situation as chaos. But it would be wrong to blame this on private enterprise and the competitive system. A private-enterprise system cannot function unless property rights are created in resources, and, when this is done, someone wishing to use a resource has to pay the owner to obtain it. Chaos disappears; and so

transaction costs, it didn't matter who held which rights; parties would bargain to an efficient outcome regardless.)⁶ But he was largely silent on the detailed ways that parties come together to bargain and write contracts in these exchange relationships. For Coase, all of this “private ordering” takes place in the shadow of property rights endowments, to be sure; but exactly *how* it takes place, and how the details of property rights affect the resulting contracts, were not issues he was concerned with.

In the 1960s and 1970s, economists began to look more closely at property rights, with special attention to specification issues.⁷ Why, they asked, do property rights extend to some activities but not others? Why do the contours of property rights change over time? The general idea that came from this approach was a progressive model of the development of property rights: when economic assets become more valuable, property rights are more tightly specified. Harold Demsetz wrote the canonical case study in this literature, when he described the effects of an increase in the value of beaver pelts in early colonial Labrador.⁸ Native peoples in that region, who had traditionally ranged freely to hunt beavers, instigated a system of proto-property rights when the increasing value of pelts led to overhunting. Demsetz described property rights as a solution to externality issues. He saw that the essentially communal regime in place before beaver pelts became more valuable imposed heavy costs on individual hunters, who were harmed by the overhunting which this system permits. So something resembling private property emerged. Put another way, the increased costs of a private property regime – which entails marking and enforcing boundaries, among other things – became worthwhile only after the value of the hunting stocks went up.

does the government except that a legal system to define property rights and to arbitrate disputes is, of course, necessary.

⁶ Ronald H. Coase, *The Problem of Social Cost*, 3 J.L.& ECON. 1 (1960).

⁷ For a retrospective, see PROPERTY RIGHTS: COOPERATION, CONFLICT, AND LAW (Terry L. Anderson and Fred S. McChesney, eds. 2003) (hereinafter Anderson and McChesney, PROPERTY RIGHTS).

⁸ Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. (PAP. & PROC.) 347 (1967).

Many scholars have applied Demsetz' theory. Some work retrospectively, to explain changes over time, while others employ the progressive model to analyze contemporary policy problems.⁹ Though the applications vary widely, they share a common vision: property rights change dynamically with changes in the economy, typically expanding as the benefits of greater individual control come to outweigh higher specification and enforcement costs.

Absent from this vision, however, is a detailed discussion of how property rights facilitate contracting. As with writings descended from Coase, the Demsetzian literature addresses transactional issues on a high level of abstraction. Most of the attention is on the initial definition and grant of property rights, typically by a government. There is some sense of post-grant "private ordering," in that resources covered by property rights are assumed to move toward their natural (highest value) use. But no attention is paid to the transactions themselves; they are seen rather as a series of frictionless resource transfers – routine, inevitable, unremarkable.

It was precisely this view of transactions that Oliver Williamson sought to overthrow. Far from taking exchange for granted, Williamson (and now many others) placed transactions at the center of his economic theory. Transaction cost economics (TCE), the field pioneered by Williamson, takes as its primary concern the problem of hazards in the transfer of resources from one economic unit to another.¹⁰ One well-studied hazard arises when a contracting party must invest considerable amounts of money in things that do not have much value outside a particular contracting relationship – deemed "asset specialization" by TCE theory. When this occurs, the beneficiary of the specialized investment gains considerable bargaining leverage over the investing party. And economic actors, according to TCE, are not shy about using this leverage. Indeed, widespread "opportunism," defined as calculated advantage-taking within the context of an exchange, is a standard assumption of the theory.

⁹ There are examples of both in Anderson and McChesney, *PROPERTY RIGHTS*, *supra*.

¹⁰ OLIVER E. WILLIAMSON, *THE MECHANISMS OF GOVERNANCE* 3 (1996) ("The identification, mitigation, and explication of contractual hazards – which take many forms, many of which went long unremarked – are central to the exercise [of TCE]."). *See also* OLIVER E. WILLIAMSON, *THE ECONOMIC INSTITUTIONS OF CAPITALISM* 175 (1985); OLIVER E. WILLIAMSON, *MARKETS AND HIERARCHIES* (1975).

A now-standard finding of the TCE literature, both theoretical and empirical, is that in situations where opportunism is common, contracting parties typically do one of two things: they either construct contractual “safeguards” to protect against the risk of being taken advantage of; or they forego contracts altogether, and bring high-opportunism exchange “in house” by integrating the two transacting parties in a single firm. (In the TCE parlance, doing so substitutes managerial “hierarchy” for arm’s-length contracting.) Integration in TCE is thus seen as a solution to pervasive opportunism in exchange relationships, explaining, for example, why a maker of auto bodies was subsumed into General Motors in the early days of the auto industry.

But integration has its costs, most notably, the lassitude that comes over a formerly hard-working company when it suddenly finds itself absorbed into a large bureaucracy.¹¹ Sometimes this is the only way to get things done given the presence of serious transactional hazards; but in other cases, parties can preserve the benefits of contracting by building in “contractual safeguards” to overcome the threat of opportunism. For example, one party to an exchange can surrender a “hostage,” something of value, to the other.¹² If the first party reneges on the deal, the second can keep the hostage.¹³ This arrangement makes performance of the original deal more likely. One example is a performance bond, such as in a construction contract. A building contractor has all sorts of ways to delay, cheat, or otherwise trouble a client who wants a new building. So the client requires the contractor to post a fixed amount of money in the form of a bond, which the client can seize if the contractor acts opportunistically.¹⁴

¹¹ In TCE lingo, this is translated as “the loss of high-powered incentives” that come with arm’s-length contracting. See WILLIAMSON, *MECHANISMS OF GOVERNANCE*, *supra*, at 43.

¹² See WILLIAMSON, *MECHANISMS OF GOVERNANCE*, *supra*, at Chapter 5 (p. 120 ff.); Oliver E. Williamson, *Credible Commitments: Using Hostages to Support Exchange*, 73 *AM. ECON. REV.* 519 (1983).

¹³ The issue is treated theoretically in WILLIAMSON, *MECHANISMS OF GOVERNANCE*, *supra*, at 129.

¹⁴ See Gerald Garvey, *Money Transfers Versus Hostages as Guarantors of Contractual Performance*, 14 *INT’L REV. L. & ECON.* 245, 245 (1994) (citing international construction contracts as classic example of a hostage situation).

Hostages can take many forms besides a bond,¹⁵ and contracting parties use many other mechanisms as well. But what ties them all together, in the eyes of TCE theory, is a common concern for reducing the risk of opportunism.

The richly detailed case studies in this Essay (Parts II and III) show convincingly that property rights can significantly reduce the risk of opportunism. Yet property rights play a distinctly minor role in TCE. Williamson includes “the hazards that accrue to weak property rights” in the list of “hazards with which transaction cost economics is concerned.”¹⁶ And some other TCE researchers explain how property rights affect economic activity.¹⁷ But TCE theorists do not attend to the specific ways that contracting parties use property rights to guard against opportunism.

One newer branch of economics that does take property rights seriously is the “new property rights” (NPR) pioneered by Oliver Hart, Sanford J. Grossman and John Moore.¹⁸ NPR takes as its starting point that many contracts are difficult to enforce – an

¹⁵ See Howard A. Shelanski and Peter G. Klein, *Empirical Research in Transaction Cost Economics: A Review and Assessment*, 11 J. L. ECON. & ORG. 335 (1995).

¹⁶ WILLIAMSON, MECHANISMS OF GOVERNANCE, *supra*, at 14.

¹⁷ David Teece, for example, has written of the importance of “appropriability” in firm organization. A leading article describes how the absence of effective intellectual property protection for some aspects of a business leads to strategic firm choices, such as (1) greater integration and (2) embedding weakly protected information in complementary assets that are themselves hard to duplicate. David Teece, *Profiting From Technological Innovation: Implications For Integration, Collaboration, Licensing and Public Policy*, 15 RES. POL’Y 285 (1986). And TCE economist Joanne Oxley finds in a series of studies that in economies with weak intellectual property protection, transactions are more often integrated in a firm or firm-like organization, because arm’s-length contracting is more risky in the absence of reliable property rights. Joanne E. Oxley, *Appropriability Hazards And Governance In Strategic Alliances: A Transaction Cost Approach*, 13 J. L. ECON. ORG. 387 (1997); Joanne E. Oxley, *Institutional Environment and the Mechanisms of Governance: The Impact of Intellectual Property Protection on the Structure of Inter-Firm Alliances*, 38 J. ECON. BEHAVIOR & ORGS. 283 (1999).

¹⁸ See Sanford J. Grossman and Oliver D. Hart, . *The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration*, 94 J. POL. ECON. 691(1986) (hereinafter, “Grossman and Hart, *Ownership*”); Oliver D. Hart and John Moore, *Property Rights and the Nature of the Firm*, 98 J. POL. ECON. 1119 (1990). A good overview of NPR theory is OLIVER D. HART, *FIRMS, CONTRACTS AND FINANCIAL STRUCTURE* (1995). For an in-depth application of NPR theory to intellectual property rights,

aspect of what is known as “contractual incompleteness.”¹⁹ A prime example is where contractual compliance is very difficult for a court to assess. Consider for example a contract where a “technology buyer” agrees to pay another firm (the “R&D” firm) for research and development work. The contract can call on the R&D firm to “work very hard” or the like, but it will be difficult for a court to determine later if the R&D firm has really done so. A court could, for example, conclude that an R&D firm had been lax in its efforts. This might permit a “technology buyer” to gain the benefits of the R&D firm’s work without having to pay full price. Knowing this, the R&D firm may be leery of entering into a contract in the first place. To solve the dilemma, the parties may rely on a legal device that operates effectively even when contracts are difficult to enforce: property rights. Giving the R&D firm a property right in the results of its work permits it to make money even if the technology buyer reneges on the deal. In the parlance of NPR theory, a property right increases the R&D firm’s “outside option.”²⁰ More generally, NPR models show that contractual incompleteness can be overcome by assigning a property right to one or the other of the transactors before contractual exchange takes place.

Economists have brought NPR theory to bear on a wide range of problems. For example, it has been employed to describe why firms contracting for R&D services often assign any resulting patents to the R&D firm.²¹ (This is basically the scenario used in the example in the prior paragraph.) Economist Ashish Arora and I apply NPR theory to show that property rights can enhance the viability of independent sellers in some

see Robert P. Merges, *Intellectual Property Rights, Input Markets, and the Value of Intangible Assets* (1999), avail. at <http://www.law.berkeley.edu/institutes/bclt/pubs/merges/iprights.pdf>.

¹⁹ This means, generally speaking, that parties to a contract cannot specify all the possible outcomes in advance. For a rigorous treatment, see Oliver Hart and John Moore, *Foundations of Incomplete Contracts*, 66 REV. ECON. STUD. 115 (1999).

²⁰ In NPR models, the outside option is synonymous with the “no-trade payoff,” the payoff from an investment in the event that a contemplated post-investment trade does not in fact take place. See OLIVER D. HART, *FIRMS AND CONTRACTS* at 43.

²¹ Philippe Aghion and Jean Tirole, *The Management of Innovation*, 109 Q.J. ECON. 1185 (1994) (hereinafter Aghion & Tirole, *The Management of Innovation*).

situations. This permits some specialty goods to be sold by freestanding, independent firms, instead of being supplied by another division of a single, integrated firm.²²

Despite its contributions, NPR theory has also been criticized.²³ The key weakness of the theory stems from the formal models on which it is built. Insightful critiques point out the sensitivity of these models to certain limiting assumptions. I do not intend to engage these debates here. My point is simply this. The somewhat brittle structure of the models that form the basis of NPR theory has led commentators to dismiss it too quickly. Property rights can be extremely effective in structuring certain transactions. Beyond the narrow and technical conditions of formal NPR theory, there are many real-world transactions in which comprehensive contracts are difficult to specify, write and enforce. The deep legal default rights that accompany property ownership come strongly into play here. They make it safe for parties to enter contracts when virtually no other form of transactional safeguard would work as well. In other words, NPR's central contribution is its *transactional* approach to property rights.

From the point of view of transaction cost economics (TCE) framework, described earlier, NPR's main insight can be stated this way: that property rights act as contractual safeguards. They are uniquely valuable in solving some problems of contractual incompleteness. This Essay applies a joint NPR/TCE perspective to a detailed review of real-world contracting, making two important findings: (1) property rights facilitate the initial approach of potential bargaining partners, by providing “precontractual protection”; and (2) property rights substantially enhance the

²² See Ashish Arora and Robert P. Merges, *Specialized Supply Firms, Property Rights, and Firm Boundaries*, 13 IND. & CORP. CHANGE 451 (2004).

²³ See, e.g., Aghion & Tirole, *The Management of Innovation*, *supra* (applying NPR theory to research and development (R&D) contracts); Georg Noldeke and Klaus M. Schmidt, *Sequential Investments and Options to Own*, 29 RAND J. ECON. 633-653 (1998) (criticizing and extending original NPR theory); Raghuram G. Rajan and Luigi Zingales, *Power in a Theory of the Firm*, 113 Q. J. ECON. 387 (1998) (same). A small empirical literature reports tests of NPR theory. See, e.g., Josh Lerner and Robert P. Merges, *The Control of Strategic Alliances: An Empirical Analysis of Biotechnology Collaborations*, 46 J. IND. ECON. 125 (1998).

enforcement options of contracting parties, through a collection of discrete rules and doctrines.

B. Why Patent Licensing Cases?

In analyzing the property-contract interface I have chosen to study intellectual property licensing cases, primarily those involving patents. In the past, this would have seemed a highly unorthodox move; before the 1990s, virtually all property theorizing was based on examples from *real* property.²⁴ But in recent years, legal theorists have discovered that intellectual property is an equally fertile²⁵ – and in some cases, superior²⁶ – source of insights.

On a practical level, case reports often provide extremely fine-grained information about negotiations and contract performance. Licensing cases are an ideal population to study because of the large volume of contracting involving intellectual property. This steady flow of legal disputes yields a rich sample to study. By my very rough count, roughly 4% of the 3627 reported patent infringement decisions in one database were the result of failed negotiations or an alleged breach of an existing licensing agreement.²⁷ Of course, reported cases may not be representative of all cases,

²⁴ See, e.g., Hohfeld, *Fundamental Legal Conceptions*, *supra*; Calabresi and Melamed, *Property Rules*, *supra*.

²⁵ See, e.g., Merrill & Smith, *Optimal Standardization*, *supra*; Carol Rose, *Romans, Roads and Romantic Authors: Traditions of Public Property in the Information Age*, 66 L. & CONTEMP. PROB. 89 (2003)

²⁶ See, e.g., Michael Heller and Rebecca Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 SCIENCE 698 (1998).

²⁷ Here is my decidedly unscientific methodology: I used the district court (“dct”) database in Westlaw. I did a search for the 2004 cases with “patent infringement” in the headnotes. There were 161. I then repeated the search, looking for an additional phrase indicative of a failed negotiation or breached licensing agreement – “trade secret,” “misappropriation,” “breach,” and the like. There were 21 of these in

for a number of reasons. But even if it is a very loose approximation, the 4% figure tells us we are discussing a substantial subset of cases. And the cases matter for reasons beyond their numbers, because they tell us something important about the role of property rights in contract negotiation and enforcement.

Finally, intellectual property licensing is an intrinsically important area of the law. As more and more assets come to be covered by intellectual property (IP) rights, and the volume of licensing transactions continues to grow (see Part IV, *infra*), this body of law will grow in importance in the coming years.

C. Property's Transactional Role

Many rules, doctrines and what I would call “basic legal attitudes” shape the interaction between property rights and contracting in the IP area. I have organized this vast and somewhat amorphous body of law into two major themes, in keeping with my primary interest in how law shapes economic exchange:

Precontractual Liability: ways in which property rights encourage disclosure of sensitive information during the negotiations leading up to a formal contract; and

Enforcement Flexibility: enhancements in the enforcement options available to contracting parties when their contracts center around property rights.

The first topic, precontractual liability, is well understood in the contracts literature. Contracts typically do not become binding until final, formal assent is given to their terms by all parties to the bargain. But in the period leading up to the “closing of the

2004. I went through those 21 cases and found 7 that met my criteria: failed negotiations or a breached license agreement. I repeated the “patent infringement” search on the entire database (1944- February 2005), and found a total of 3627 cases, and then searched again for cases with “patent infringement” and also “trade secret,” “misappropriation,” and the like. There were 403. On the (unsupported!) assumption that the same ratio that held for 2004 holds for the entire sample, I assumed that 1/3 of these 403 were of the type I was searching for. That number is 134, which is a bit less than 4% of 3627. Q.E.D. (!!)

deal,” much valuable information may be exchanged on both sides. When a deal falls apart before consummation, aggrieved parties have used a number of legal theories to seek recovery for the value of information exchanged during negotiations. These lawsuits have had decidedly mixed results. Yet a careful reading of the body of patent infringement cases reveals that the contracts literature has overlooked the most effective form of precontractual liability: property rights. Again and again, I have found cases involving patent infringement where the facts reveal an earlier attempt at licensing. Often a misappropriation of trade secrets cause of action is added to these cases, but by far the most effective theory of recovery is for patent infringement. Even when a misappropriation claim succeeds, a patent or patent application is usually to be found in the background, again demonstrating the important role of property rights in facilitating economic exchange. This broad assortment of cases demonstrates conclusively the crucial role that property rights play in creating incentives to make precontractual disclosures, and hence, in the structuring of economic exchange generally.

To the second major topic I have attached the label “enforcement flexibility.” This phrase pulls together under one heading a disparate collection of rules, doctrines, and scattered cases that collectively enhance the position of property holders when contractual disputes break out. So for example patent licensors can usually choose to enforce their bargains either by bringing a state law action sounding in contract or a federal action for patent infringement. This sometimes translates into a choice between state and federal courts – a choice worth having for a number of practical reasons. State courts are far more expert in the application of contract law, given their much larger caseload in this area. But federal patent infringement actions can bring superior remedial options, including the possibility of treble damages and attorney fees. The freedom to choose among fora and causes of action also carries a host of additional advantages, ranging from a longer statute of limitations in patent actions to the fact that a state court action does not put the validity of a patent at risk.

Through a host of sometimes minor doctrines, both substantive and procedural, patentholders are given significant advantages in the enforcement of contractual bargains. These advantages add up. Taken together, they represent an important additional reason why property rights facilitate contracting. By increasing the strategic options of a

contracting party, they encourage bargaining and exchange. Just as in the case of precontractual liability, these features of property rights foster transactions, the backbone of economic activity.

II. Property Rights and Precontractual Liability

Contract law is founded upon mutual agreement. Unless and until parties mutually agree, there is no contract – and hence no basis for legal liability. This is the mainspring of legal “assent”: an offer without acceptance gives the offeror nothing; a purported acceptance with no valid offer gives the offeree nothing. Indeed, the fabric of contract law – from consideration to remedies – is shot through with indications of the importance of assent.

Assent has proven to be a durable mechanism for determining when legal liability attaches. Although there are of course grey areas, it is in general a useful bright line rule. But like many such rules, it comes at a cost. In cases where valuable information must be exchanged in order to *achieve* assent, liability under breach of contract principles may attach too late in the process to encourage the optimal amount of disclosure.

Sometimes negotiating parties do not have to share much information to strike a deal. A “spot market” purchase of some standard commodity – wheat or corn, for instance – works like that. Other cases are different. Potential transactors must sometimes relate a good deal of information during the course of contract negotiations. This is especially true where the seller is selling a complex asset whose features and qualities are difficult for the buyer to ascertain. The seller must explain the features of the asset, often by disclosing information about how it is made, how it does under various tests, and so on. Likewise, where the buyer is purchasing an input that is to be used as part of a larger assembly or process, the buyer must disclose some details about its overall operation, so the seller can be sure the asset in question will work for its intended purpose.

Time and again in intellectual property cases there is evidence that, during negotiations to sell a business, license a patent, or the like, the parties have exchanged valuable information. Sellers or licensors in particular often must disclose details

concerning a new technology in order to interest a buyer and in order to justify the price and other terms asked by the seller. A seller who does not disclose at least some information is asking the buyer to purchase “a pig in a poke.” This has not been lost on economists. Most pertinent is the work of economics Nobelist Kenneth Arrow. Over forty years ago, Arrow posited what has since come to be known as Arrow’s information paradox:²⁸ information cannot be evaluated by a buyer until it is disclosed, but then the buyer has no reason to pay for it because he or she already has it.²⁹ (Arrow made this observation in the context of a discussion of the economics of patents – anticipating at the broad theoretical level the discussion of section II below.)

Courts have not been blind to this; in response, they have developed an amorphous body of law known as “precontractual liability.” Various doctrines under this heading have been applied to find liability of one sort or another before a formal contract is signed. But as we shall see, none provide reliable protection for those involved in precontractual negotiations.³⁰ Here is where property rights come in – as we shall see, in section II.A. below.

²⁸ See Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in THE RATE AND DIRECTION OF INVENTIVE ACTIVITY (Richard R. Nelson, NBER, ed. 1962), at 609, 615. It is *not* called just “Arrow’s paradox,” because then it might be confused with another of Arrow’s pathbreaking concepts – his “voting paradox,” also known as “vote cycling.” See JOSEPHINE TYE ANDREWS, WHEN MAJORITIES FAIL: THE RUSSIAN PARLIAMENT, 1990-1993 (2002).

²⁹ Cf. *Micro Data Base Systems, Inc. v. Dharma Systems, Inc.* 148 F.3d 649 (7th Cir. 1998) (Posner, J.), in which a software developer released copies of its program design to a project partner, as part of an overall effort to sell software to a large customer, Unisys. Writing for the court, Judge Posner wrote:

[A] commercial secret rarely has value if it is known only to one person. Others must be let in on the secret and the remaining secrecy preserved by contracts forbidding disclosure to still others who might exploit it commercially to the harm of the secret holder. The [software] could not be sold without giving the ultimate buyer, Unisys, a chance to inspect it.

³⁰ The classic contribution here is E. Allen Farnsworth, *Precontractual Liability and Preliminary Agreements: Fair Dealing and Fair Negotiations*, 87 COLUM. L. REV. 217 (1987) (hereinafter Farnsworth, *Precontractual Liability*). Some recent contracts scholarship aspires to overthrow the traditional “mutual assent” benchmark, and install a more nuanced regime of legal liability that would slowly bind parties over time during negotiations; but courts have not yet caught wind of this. See Lucian Arye Bebchuk & Omri Ben-Shahar, *Precontractual Reliance*, 30 J. LEGAL STUD. 423 (2001); Omri Ben-

Most of the theories of precontractual liability are rooted in some form of restitution. Where valuable information is disclosed in the course of negotiations which later collapse, restitution theories have been effective grounds of recovery in some cases.³¹ Yet as the cases show these theories suffer from a number of defects. The bulk of authority provides that, for a disclosure to be compensable, the disclosing party must have made the disclosure with the expectation of compensation. This foundational principle of the law of restitution finds expression in the body of law most usually applied to these circumstances, trade secrecy, via the requirement of a “confidential relationship.” When the facts indicate that a disclosure was not made in confidence – and they often do – there is no recovery for misappropriation of trade secrets.³²

The problematical features of conventional precontractual liability are well displayed in a series of cases concerning sale-of-business disclosures. One line of authority holds that negotiations in this setting are assumed to be conducted under a veil of confidentiality; hence disclosures are protected by trade secret law.³³ Another, including some more recent cases, disagrees, finding either no confidential relationship or no proof that the information disclosed was used in a way proscribed by trade secret law.³⁴ Even cases which recognize confidentiality as a general rule often find no

Shahar, *Essay: Contracts Without Consent: Exploring A New Basis For Contractual Liability*, 152 U. PA. L. REV. 1829 (2004). *See also Symposium: Freedom from Contract*, 2004 Wis. L. Rev. 261 et seq. (2004). *But see* Ronald J. Mann, *Contracts – Only With Consent*, 152 U. PA. L. REV. 1873 (2004) (criticizing these proposals on pragmatic, doctrinal grounds).

³¹ *Id.*, at 223-224 (discussing exemplary case of *Earhart v. William Low Co.*, 25 Cal.3d 503, 600 P.2d 1344, 158 Cal.Rptr. 887 (1979)).

³² For example, many cases hold that no confidential relationship is established when negotiating a distributorship agreement, even though valuable information may be disclosed in this setting. *See, e.g.*, *In re Dippin’ Dots Patent Litigation*, 249 F.Supp.2d 1346 (N.D.Ga. 2003).

³³ *Booth v. Stutz Motor Car Co. of America*, 56 F.2d 962 (7th Cir. 1932); *Hoeltke v. C.M. Kemp Mfg. Co.*, 80 F.2d 912, 922-23 (4th Cir. 1936) (restitution theory); *Cloud v. Standard Packaging Corp.*, 376 F.2d 384 (7th Cir. 1967). *Cf. Lucini Italia Co. v. Grappolini*, 2003 WL 1989605 (N.D. Ill. 2003) (finding liability against consultant who misappropriated business opportunity offered by plaintiff).

³⁴ *Omnitech, Int’l v. Clorox Co.*, 11 F.3d 1316 (5th Cir.), cert. denied, 115 S. Ct. 71 (1994) (unsuccessful suit by seller of line of business against potential buyer who later bought competitor); *Besly-*

confidential relationship under the facts presented.³⁵ In any event this is often a very close question.³⁶ The upshot is the occasional upwelling of a restitutionary impulse, a rational person cannot rely on trade secret law to protect sensitive disclosures made at the precontractual stage of negotiations.

Welles Corp. v. Balax, Inc., 291 F.Supp. 328, 346 (E.D. Wis. 1968), aff'd in rel. part, Bendix Corp. v. Balax, Inc. 421 F.2d 809 (7th Cir.) cert. denied 399 US 911 (1970) (disclosures to potential investor or buyer of business: "The plaintiffs have failed to demonstrate that a confidential relationship existed or was contemplated by the parties. Therefore, the plaintiffs have not sustained their burden of proof that the defendants appropriated trade secrets."). *See also* In re Dippin' Dots Patent Litigation, 249 F. Supp. 2d 1346, 1377 (N.D. Ga. 2003) (stating that Uniform Trade Secrets Act, promulgated in 1995 and now adopted in twenty states, categorically excludes cases based on "implied confidentiality"); Expansion Plus Inc. v. Brown Forman Corp., 132 F3d 1083 (5th Cir. 1998) (no ongoing confidential relationship found to arise from negotiations between software development company and another company that was interested in potentially acquiring rights in the software and promoting it commercially).

³⁵ Cloud v. Standard Packaging Corp., 376 F.2d 384, 388-389 (7th Cir. 1967) (footnote omitted):

Where the facts show that a disclosure is made in order to further a particular relationship, a relationship of confidence may be implied, e.g. disclosure to a prospective purchaser to enable him to appraise the value of the secret, disclosure to a prospective lender to assure him of the prospects of the borrower's business, disclosure to agent, partner, or joint adventurer. Here, however, no relationship between the parties existed prior to or at the time of the disclosure . . . , and although [the parties] had several discussions at later dates, of the problems involved, we find no dealing from which a relationship of confidence is reasonably to be implied.

See also Pachmayr Gun Works, Inc. v. Olin Mathieson Chemical Corp., Winchester Western Division, 502 F.2d 802, 808 (9th Cir. 1974) ("[T]he courts will consider the factual circumstances of each case on an individual basis, to determine whether a confidential relationship may reasonably be implied.").

³⁶ Cf. Burten v. Milton Bradley Co., 763 F.2d 461, 464 (1st Cir. 1985) (existence of confidential relationship is "so close a question in this case"; ultimately reversing trial judge's grant of JNOV motion after jury verdict in favor of plaintiff, and therefore imposing liability for breach of confidence).

Even if a disclosing party can establish the presence of a “confidential relationship,” there are other hurdles to recovery. For one, the recipient of the disclosure may prove that the parties expressly agreed not to be bound by any undertaking short of a final, formal contract.³⁷ In effect, parties can (and do) contract out of precontractual liability. In addition, the recipient of the information may be able to show the absence of other elements necessary to establish recovery for misappropriation of trade secrets – that the disclosing party did not take reasonable precautions to protect against widespread dissemination of the information, for example,³⁸ that the information in question was

³⁷ See Farnsworth, *Precontractual Liability*, *supra*, at 257; *Kearns v. Ford Motor Co.*, 203 U.S.P.Q. 884, 888 (E.D.Mich. 1978) (footnote omitted) :

It is, quite simply, incredible that on the basis of two contacts three days apart [that plaintiff] . . . formed with a mammoth, multi-national corporation a relationship of trust and confidence completely contrary to the plain language of a waiver [prohibiting reliance on a confidential relationship] he admits to having voluntarily signed. . . . Even assuming, *arguendo*, that such a relationship had come into being in the three days before the first waiver was signed, the Court cannot but conclude that plaintiff's right to rely thereon was effectively terminated when the waiver form was first presented to him, for at that point he was put on notice of defendant's position and could have taken appropriate action. This the plaintiff did not do; instead, he signed the first waiver then and similar ones on two subsequent occasions.

See also *Cargill, Inc. v. Sears Petroleum and Transport Corp.*, 334 F.Supp.2d 197, 245 (N.D. N.Y. 2004) (rejecting summary judgment in favor of disclose, but noting that disclosee sent a letter prior to the meeting in which the disclosure occurred providing: “Our agreement to meet with you is contingent on your acknowledgment that no confidential information or otherwise proprietary information shall be exchanged.”). Cf. *Hirsch-Chemie, Ltd. v. The Johns Hopkins University*, 36 U.S.P.Q.2d 1395, 1398 (4th Cir. 1985) (unpublished) (preliminary negotiations, including an exchange of letters, did not create a binding license agreement nor even an implied-in-fact contract); *Pleatmaster, Inc., v. Consolidated Trimming Corp.*, 111 U.S.P.Q. 124 (N.Y. Sup. Ct. 1956) (defendant has valid defense to contract suit for royalties where defendant informed patentee/licensor it would not pay royalties until a contract was signed).

³⁸ *Besly-Welles Corp. v. Balax, Inc.*, 291 F.Supp. 328, 346 (E.D. Wis. 1968), *aff'd in rel. part*, *Bendix Corp. v. Balax, Inc.* 421 F.2d 809 (7th Cir.) cert. denied 399 US 911 (1970) (“It is the court's opinion that the plaintiffs should have regarded [defendant's agent] as a potential competitor. The plaintiffs did not take reasonable precautions which would prevent him from becoming a competitor if a satisfactory arrangement could not be worked out with [plaintiffs]. Viewing [defendant's agent] as a potential

never actually disclosed,³⁹ or that the “disclosee” did not make use of the information in a way that violates trade secret law.⁴⁰ The lesson from the cases is this: a good deal of useful information may be transmitted during negotiations, but many uses of the information are not *actionable*.

A case in point is *Omnitech International, Inc v. Clorox Co.*⁴¹ Omnitech was trying to sell its insecticide line of business to Clorox. During preliminary negotiations, Omnitech claimed that it disclosed much useful information to Clorox, both about the details of its products and about the insecticide business in general. Clorox signed a nondisclosure agreement and an option to purchase Omnitech, but later acquired one of Omnitech’s competitors instead. The Fifth Circuit upheld dismissal of Omnitech’s claim for misappropriation of trade secrets. The court acknowledged that there may well have been a confidential relationship between the prospective buyer and seller in this case due to the nondisclosure agreement, but emphasized that Omnitech had not proven that Clorox disclosed Omnitech’s information. Omnitech witnesses testified that Clorox must have made “use” of the Omnitech information in evaluating its bid for the competitor insecticide company. But the court stated that “to sustain a trade secrets action under the use prong of the statutory definition of ‘misappropriation,’ a plaintiff must necessarily demonstrate that the defendant received some sort of unfair trade advantage.”⁴² Thus although the education that Omnitech provided was no doubt valuable, simply making

competitor, the plaintiffs should have taken steps to insure the confidentiality of the information given to him.”).

³⁹ *Heyman v. AR. Winarik, Inc.*, 325 F.2d 584, (2d Cir. 1963) (although confidential relationship existed during negotiations over the sale of a business, plaintiff never disclosed secret product formula or ingredients to defendant).

⁴⁰ *Heyman v. AR. Winarik, Inc.*, 325 F.2d 584, (2d Cir. 1963) (customer information given to prospective buyer of business during negotiations did qualify for trade secret protection, but defendant made no actionable use of it).

⁴¹ 11 F.3d 1316 (5th Cir.), cert. denied, 115 S. Ct. 71 (1994).

⁴² 11 F.3d 1316, 1325.

Clorox smarter about the market for insecticides was not enough to trigger liability under trade secret law.⁴³ The same pattern holds in related areas of the law as well.⁴⁴

A case involving an invention in the aluminum processing industry provides another example of the limitations of pre-contractual liability theories. In *Howell v. Alcoa*,⁴⁵ two inventors had developed an improved version of a common tool used in the aluminum industry. Representatives of Alcoa visited one of the inventors in his workshop to view a prototype and discuss a potential supply arrangement. The Alcoa officials were noncommittal, however. When a suspiciously similar design later turned up in use at Alcoa's factory, the inventors sued for precontractual liability under various theories. Unfortunately for them, the court held (partly on the basis of tape recordings made at the time of the meeting) that the officials involved clearly signaled their unwillingness and inability to enter into a formal contract or indeed to commit Alcoa in any way. According to the court,

[The Alcoa official] made it evident to [plaintiff-inventor] that he . . . did not have the authority to enter into the contract which [the inventor] sought. [The official]discussed with [the inventor] the process of reaching some agreement with Alcoa in terms of "steps," one being determining whether the purchasing department would be willing to contract out for [the invention], and another being

⁴³ Two years later the Eighth Circuit followed *Omnitech* in a case involving essentially identical facts. *Sip-Top, Inc. v. Ekco Group, Inc.*, 86 F.3d 827 (8th Cir. 1996).

⁴⁴ Speaking of the closely analogous situation where an independent contractor is hired to assist in the work of a corporate employer, a treatise writer states:

Where independent contractors are employed, a duty of nondisclosure may be inadequate protection for the trade secret holder. It is often difficult to establish that unauthorized use occurred even if the contractor subsequently engages in competitive activity. Presumably, a contractor is selected because of its capability, especially in reference to design or production work. During the course of the contract, this capability may be enhanced by accumulated experience. Following termination of the original contract, the independent contractor will seek to use these capabilities and experience for its own purposes.

RAYMOND T. NIMMER, *THE LAW OF COMPUTER TECHNOLOGY* § 3:28 (2004).

⁴⁵ 8 F.Supp.2d 1012 (E.D. Tenn. 1997).

the obtaining of a price quotation from [the inventor] for consideration. . . . It is clear that [the official] contemplated that there would not be any binding agreement between [the inventor] and Alcoa until there was a written contract signed by the parties.⁴⁶

This is a classic list of problems that potential suppliers, such as the inventors in this case, face when beginning the process of disclosing and negotiating with a potential buyer. This proved fatal to the various contract-based theories of recovery that the two inventors had relied on. Without a property right, in a situation where preliminary negotiations did not produce a contract, the seller was left without any legal recourse.

A. *The Role of Property Rights in Precontractual Disclosures*

If precontractual disclosures were rare, the uncertainty in this area would not amount to much. But the truth is quite the opposite. In many cases, in particular where something new and untried is the subject of contract negotiations, much of value is disclosed. So how does a disclosing party cope? In this section we see one effective solution: by owning property rights.

Property rights are often characterized by their effect on “strangers”: thus they are conventionally spoken of as being “good against the world.”⁴⁷ This is without doubt one of their most distinctive features, and a chief virtue as well. It is particularly important in distinguishing them from contracts, which as we have seen are binding only on the specific parties that assent to their terms. But all this talk of universality obscures their role in the structuring of bilateral exchange. In the negotiation period leading up to the signing of a contract property rights play an absolutely crucial role. Case after case mentions the disclosure of sensitive information during the precontractual stage. So while

⁴⁶ 8 F.Supp.2d 1012, 1015.

⁴⁷ See, e.g., Thomas W. Merrill and Henry E. Smith, *The Property/Contract Interface*, 101 COLUMBIA L. REV. 773 (2001).

property rights are indeed “good against the world,” one crucial slice of the world – negotiating partners – is overlooked. Too bad, because this is perhaps *the* key group of actors that is covered by the ambit of property rights.

The case law presents many examples. In *Celeritas Technologies, Inc. v. Rockwell Int’l Corp.*,⁴⁸ plaintiff Celeritas, having developed an advanced technique for correcting errors in modem transmissions, entered into negotiations with Rockwell, the dominant manufacturer of modems. After seven months of negotiations, the parties failed to conclude a formal joint business arrangement.⁴⁹ Rockwell later began selling a product based on similar technology.⁵⁰ *Medtronic, Inc. v. Mine Safety Appliance, Inc.*⁵¹ is similar: the sales agent for a subsidiary of Mine Safety disclosed technical information to medical pacemaker manufacturer Medtronic, an important buyer of Mine Safety’s lithium/iodine (Li/I) batteries. The parties engaged in “technology exchanges in furtherance of developing Li/I cells for pacemaker use,”⁵² which eventually resulted in a joint research and development agreement, and eventually, an attempt by Medtronic to make the batteries itself, cutting Mine Safety out of the picture.⁵³ A final example comes from *Monolith Portland Midwest Co. v. Kaiser Alum. & Chem. Corp.*,⁵⁴ a case involving technology for treating high-temperature brick kilns. The opinion in the case provides particularly rich details regarding the sorts of routine technical disclosures made in advance of a licensing transaction. The court recites numerous detailed disclosures regarding technical features of kiln construction, in particular techniques for attaching the

⁴⁸ 150 F.3d 1354 (Fed. Cir. 1998).

⁴⁹ 150 F.3d at 1356-1357.

⁵⁰ Celeritas had obtained a patent on its technology. Although the patent was later invalidated, Rockwell was found liable for violation of a written nondisclosure agreement entered into at the beginning of negotiations. This general phenomenon – disclosures made under the protection of a patent or patent application – is discussed *infra* section III.A.2.

⁵¹ 203 U.S.P.Q. 1062 (D. Min. 1979).

⁵² 203 U.S.P.Q. at 1065.

⁵³ *Id.*

⁵⁴ 152 U.S.P.Q. 380 (C.D. Cal. 1967)

kiln lining to the outer section of the kiln. Detailed testimony relates in-depth conversations concerning problems in kiln operation, and suggested solutions to those problems. After licensing negotiations broke down, Midwest later sued for both misappropriation of trade secrets and patent infringement.⁵⁵

Many other cases reveal the same pattern of disclosures on the way to a final contract.⁵⁶ Often, the parties agree to an interim contract, designed to cover only the disclosure and negotiation period. (Because these contracts are perfunctory and incomplete, and designed merely to foster negotiation of the “real” contract, I treat them as part of the “precontractual” period.) These temporary contracts are of two types. One, usually written by a large company that wants to foreclose liability as much as possible, expressly rules out *any* form of precontractual liability. A recent case involving Lexmark, the computer printer company, is of this sort.⁵⁷ Obviously if no final contract is ever signed, it is very difficult for a disclosing party to make any headway in the face of such a contract. (That became painfully obvious to BDT Products, Inc., the other party in the *Lexmark* case.)

There is another type of interim contract, the nondisclosure agreement (NDA), which sometimes better protects the disclosing party. An NDA is signed typically at the

⁵⁵ 152 U.S.P.Q. 380, 424 (breakdown in licensing negotiations). Illustrating some of the shortcomings of relying on trade secret theories in this context, the court found that none of the plaintiff’s disclosures amounted to trade secrets (e.g., because they were based on the opinion of plaintiff’s technical expert, and not backed up with hard data; see 152 U.S.P.Q. at 401), and that the negotiations were not in any event conducted in an “atmosphere of confidentiality” (152 U.S.P.Q. at 420).

⁵⁶ For a sampling of very recent cases, see, e.g., *Kara Technology, Inc. v. Stamps.com, Inc.*, 2005 WL 323749, at 1 (S.D.N.Y.) (Feb. 8, 2005) (motion to transfer in case where patentee disclosed online stamp business technology to defendant in context of licensing negotiation; defendant broke off negotiations and later entered the market); *Medtronic Vascular, Inc. v. Advanced Cardiovascular Systems*, 2005 WL 46553 (D. Del.) (Jan. 5, 2005) (allegations regarding disclosure of intricate details of new post-surgical vascular “stent” in context of effort to “looking for a partner to develop [plaintiff’s] technology”); *Online Technologies, Inc. v. Bodenseewerk Perkin-Elmer GMBH*, 386 F.3d at 1135, 1138 (Fed. Cir. 2004) (Plaintiff Online Technologies asserted that it “had revealed its gas cell design to Perkin-Elmer scientists in anticipation of a possible business arrangement between the companies relating to On-Line’s device.”).

⁵⁷ *BDT Prods., Inc. v. Lexmark Int’l Inc.*, 274 F.Supp.2d 880 (E.D. Ky. 2003).

outset of negotiations. It is designed to protect against disclosure, and sometimes “use,” of information disclosed during the negotiations – typically, information the negotiators consider trade secrets. NDAs are not intended to be final, binding contracts. They are usually limited in ways that hurt a disclosing party’s chances of recovery later. For one thing, some sophisticated parties refuse to sign them.⁵⁸ For another, they often excuse a “disclosee” from liability where the disclosed information is available elsewhere at the time of disclosure. This can provide a robust defense for the “disclosee,” who need only show that the information disclosed during the negotiations could have been acquired from some public domain source. Secondly, enforcing these agreements is a highly fact-intensive exercise. To recover, the disclosing party must prove that certain *specific* information was disclosed, typically at a certain meeting, which may have happened some years before a deposition or trial. In short, NDAs involve nontrivial problems of proof. For these reasons, they are far less effective than final, formal agreements. Most business people know this; they know that even with a signed NDA, precontractual disclosures can be risky for the disclosing party.⁵⁹ As we will see in the next section, this explains why property rights are so often sought by disclosing parties.

⁵⁸ John G. Petrovich, “Funding a Computer Technology Startup,” Practising Law Institute, Patents, Copyrights, Trademarks and Literary Property Course Handbook Series, 547 PLI/Pat 769 (Feb.-Mar. 1999), 769, 771 (“Most venture capitalists outright refuse, or resist strenuously, signing a confidentiality or nondisclosure agreement, claiming that it invites legal problems.”)

⁵⁹ See, e.g., Note, Christopher D. David, *When a Promise is Not a Promise: Georgia’s Law on Noncompete Agreements, as Interpreted by the Eleventh Circuit in Keener v. Convergys Corporation, Gives Rise to Comity and Federalism Concerns*, 11 J. INTELL. PROP. L. 395, 396 (2004) (“Thus, the express non-disclosure agreement is, at best, an incomplete protection against disclosure.”); Miles J. Feldman, *Comment, Toward A Clearer Standard of Protectable Information: Trade Secrets and the Employment Relationship*, 9 HIGH TECH. L.J. 151, 181 (1994) (“The problem with confidentiality agreements is that they are not always available to new or smaller firms, which have only limited access to legal counseling.”; “There is also the problem of trying to protect the unknown – it may be impossible to define the trade secret at the outset of the . . . relationship, because the underlying research and development has not yet been done.”; “Scientists and engineers who understand the mercurial nature of the technology industry are reluctant to sign confidentiality agreements because they do not want to sacrifice their future mobility.”).

1. The Precontractual “Field Effect” of Property Rights

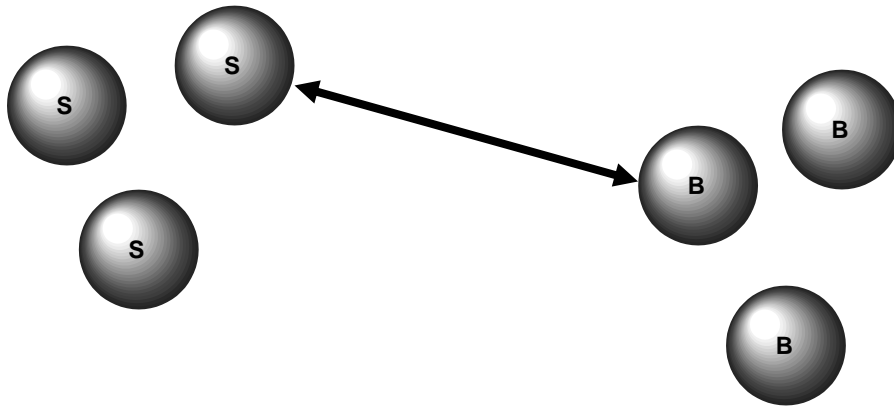
Property rights are often said to be “good against the world.” The owner of a property right need not show any special relationship with a third party in order to have legal rights against that party. This is one of the sharpest points of contrast between contracts and property rights. One easy way to envision this aspect of property rights is to see them as creating a “field of legal protection” around an asset.⁶⁰ Anyone who comes within a certain distance of the field is subject to it, even though they have not yet made actual contact with the asset’s owner. The field protects the asset, and it is this feature that makes the asset owner more confident about allowing the asset “out into the world,” where it can be inspected by those who might want to contract with the asset’s owner.

There is a natural contrast here with exchange based strictly on contact rights, i.e., exchange in the absence of property rights. A contract is a direct legal relationship between two discrete economic actors – much like a direct connection between two “nodes” on a network. Until the direct link is established, the two nodes remain independent; they have no legal duties toward one another. Generally speaking, the legal duties created by contract come into being only as a result of the contractual relationship. As a consequence, an asset that is to be transferred strictly by contract occupies a precarious position in the period leading up to the contract. Until the direct relationship is firmly established, the asset is at risk. Knowing this, owners asset owners will have to be much more careful about who has access to it, and under what circumstances. It is precisely these limitations on the pre-contractual dealings between parties that property rights overcome so effectively. The figures that follow illustrate these concepts.

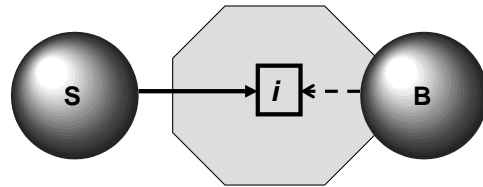
⁶⁰ Others have suggested that property rights may be viewed this way. See Thomas W. Merrill & Henry E. Smith, *What Happened to Property in Law and Economics?*, 111 YALE L.J. 357, 359 (2001):

When we encounter a thing that is marked in the conventional manner as being owned, we know that we are subject to certain negative duties of abstention with respect to that thing – not to enter upon it, not to use it, not to take it, etc. And we know all this without having any idea who the owner of the thing actually is. In effect, these universal duties are broadcast to the world from the thing itself.

**A Contract Represents a Direct
“Node to Node” Connection
Between Seller (S) and Buyer
(B)**



**Property Rights Create a Legal
“Field” Around an Information
Asset (i), Protecting Seller (S)
During Buyer’s (B)
Precontractual Evaluation**



2. What Disclosures do Property Rights Encourage? Evidence from the Caselaw

The caselaw shows that property rights – again, primarily patents – facilitate disclosure of three primary types of information: (1) information contained in patent applications, which are kept secret for a substantial time after filing; (2) details beyond what is disclosed in a patent or patent application; and (3) valuable but unpatented information beyond the boundaries of the patent.

In the world of R&D, timing is often crucial. This is evident from trade secret cases, where a common remedy is an injunction preventing a party from using misappropriated information for a certain period – the “headstart” period which rightfully belongs to the trade secret’s owner. By the same token, early receipt of information that will later be published in an issued patent (or, these days, a published patent application) may also be quite valuable. The cases reflect the importance of timing. Courts have, for instance, found liability for misappropriation of trade secret information later made

public in an issued patent. So too with later-published information. The cases stress the advantage of early knowledge, ahead of the general public.

An issued patent usually does not disclose everything of value about an invention and the surrounding technology. Patent specifications are not “production handbooks”; much in the way of practical detail may lawfully be left out. And much of what is left out may be valuable. We know from detailed case studies of the development of specific technologies that the aggregate value of all the “minor” improvements, tweaks, and accumulated operational wisdom often exceeds the value of the basic invention itself.⁶¹ This explains why so many patent license agreements also include a provision for the licensing of ancillary trade secrets and know-how.⁶² Indeed, some instructive articles from the economics literature suggest that the *primary* purpose of patents is to spearhead the transfer of the really valuable stuff – the associated nonpatented information.⁶³

There is also a broad category of information that is related, but ancillary, to the main disclosures of the patent: not details of the patented invention and its implementation, but information about the business setting in which the technology may be employed, potential customers and their needs, and the like. This may grow out of market research done in connection with the actual R&D, or it may come from the experience of the R&D firm itself. This can be very valuable information, whatever its form.

3. Patents as Precontractual Protection

⁶¹ See, e.g., SAMUEL HOLLANDER, THE SOURCES OF INCREASED EFFICIENCY: A STUDY OF DUPONT RAYON PLANTS (1965) (primary importance of incremental process innovations in overall productivity improvement in nylon production technology).

⁶² See Edmund Kitch, *The Nature and Function of the Patent System*, 20 J. L. & ECON. 265 (1977), reprinted in FOUNDATIONS OF INTELLECTUAL PROPERTY (Robert P. Merges and Jane C. Ginsburg, eds. 2004), at 140.

⁶³ See by ASHISH ARORA, ANDREA FOSFURI, AND ALFONSO GAMBARDELLA, MARKETS FOR TECHNOLOGY (2002); Ashish Arora, *Contracting for Tacit Knowledge: The Provision of Technical Services in Technology Licensing Contracts*, 50 J. DEVELOP. ECON. 233 (1995)

As a case study, consider *Online Technologies, Inc. v. Bodenseewerk Perkin-Elmer GMBH*.⁶⁴ A small company, Online, executed an agreement under which it disclosed details about its proprietary gas chromatograph technology to defendant Bodenseewerk Perkin Elmer (BPE), a potential customer and joint venture partner. The disclosing party, Online, was clearly expert in the technology area in question,⁶⁵ and there are indications that BPE learned some valuable information.⁶⁶ Yet the court ruled that Online had not proven that BPE misappropriated any trade secrets. Much of the court's discussion centers on a "battle of expert reports," which is typical of this area of law. In

⁶⁴ 386 F.3d at 1135, 1138 (Fed. Cir. 2004).

⁶⁵ The *Online Technologies* case centered on U.S. patent 5,440,143. One of the coinventors listed on this patent, Robert M. Carangelo, is listed on numerous other patents and publications in this area. *See, e.g.*, David B. Fenner and Robert M. Carangelo, U.S. Patent RE35,872, August 18, 1998; Steven C. Bates, Robert M. Carangelo, et al., "FT-IR Hadamard tomography of sooting flames", 64 Rev. Sci. Instrum. 1213-1221, (1993). Carangelo also received an award from "R&D Magazine" as a participant in one of the top 100 R&D projects of 1994. See R&D 100 Awards Archive, 1994, project listing : "Benchtop Emissometer Model 205 WB," produced by Advanced Fuel Research, Inc. and On-Line Technologies, Inc., avail. at <http://www.rdmag.com/rd100ach/RD100SearchResults.aspx?&intYear=1994&Type=Y>.

⁶⁶ For example, the Federal Circuit opinion states:

[T]he district court concluded that undisputed evidence showed that Perkin-Elmer did not begin to incorporate the features of On-Line's gas cell into its own product until 1996, after the issuance of [On-line's] patent. Although On-Line referred to evidence regarding Perkin-Elmer's conduct before the issuance of the . . . patent, the district court held that none of that evidence was probative of misappropriation because the conduct in question all constituted legitimate evaluation of On-Line's product pursuant to the nondisclosure agreement entered into by On-Line and Perkin-Elmer in 1994.

386 F.3d at 1141. It is evident from this that BPE probably learned much about On-line's technology during the negotiations; BPE simply did not *incorporate* this information into a useful product until after On-line's patent issued. It seems unlikely that BPE "unlearned" the lessons it acquired from On-line while "evaluating" the On-line technology, and then "re-learned" them by reading On-line's patent when it later issued. The real point seems to be, once again, the elusive nature of trade secret misappropriation claims, which made it difficult for On-line to carry its burden of proof regarding exactly how BPE *used* what it learned from On-line in 1994.

the end, the court was more persuaded by BPE's expert than Online's.⁶⁷ Although Online had disclosed detailed information, the court held, much of the information was eventually disclosed in Online's patent when it issued,⁶⁸ or in a patent to a third party.⁶⁹ In addition, BPE was engaged in "legitimate evaluation of On-Line's product pursuant to the nondisclosure agreement entered into by On-Line and Perkin-Elmer."⁷⁰

This aspect of the *Online Technologies* case demonstrates the weaknesses of trade secret law in protecting sensitive information. Fortunately for Online, it had another leg to stand on: patent infringement. While Online was negotiating with BPE, it was also pursuing a patent application, which issued as U.S. Patent No. 5,440,143 ("the '143 patent"), in 1995.⁷¹ The patent covered the very technology that Online was trying to license to BPE, viz., a method for increasing the length of the light path in a spectrometer gas cell. And this patent made a major difference in the case. The Federal Circuit held that the patent claim at issue covered the products made and sold by the defendant.⁷² This gave Online an opportunity to recover against defendant BPE, notwithstanding its failure to prove that BPE misappropriated any Online trade secrets.

⁶⁷ See, e.g., 386 F.3d at 1142 ("[BPE's expert] averred that he had learned nothing useful about On-Line's gas cell [when he visited the Online site during preliminary negotiations] that was not already evident from On-Line's nonconfidential marketing brochure. On-Line did not offer evidence to contradict [this] representation"); Id., at 1144 ("On-Line failed to address the assertions in [BPE's expert's] affidavit that the mirror array in the source assembly was "text-book". . . Although On-Line argues that the earlier device did not use a ceramic igniter as the energy source, there was no evidence before the district court that the difference in the energy source rendered On-Line's source assembly sufficiently distinct to constitute a protectable trade secret.").

⁶⁸ 386 F.3d at 1141.

⁶⁹ 386 F.3d at 1143.

⁷⁰ Id.

⁷¹ The patent shows a filing date of February 25, 1994; the *On-line* case notes that the NDA was signed with BPE "in 1994." 386 F.3d at 1141.

⁷² 386 F.3d at 1140 (reversing district court claim construction, which had been basis of summary judgment of no infringement; remanding for further proceedings).

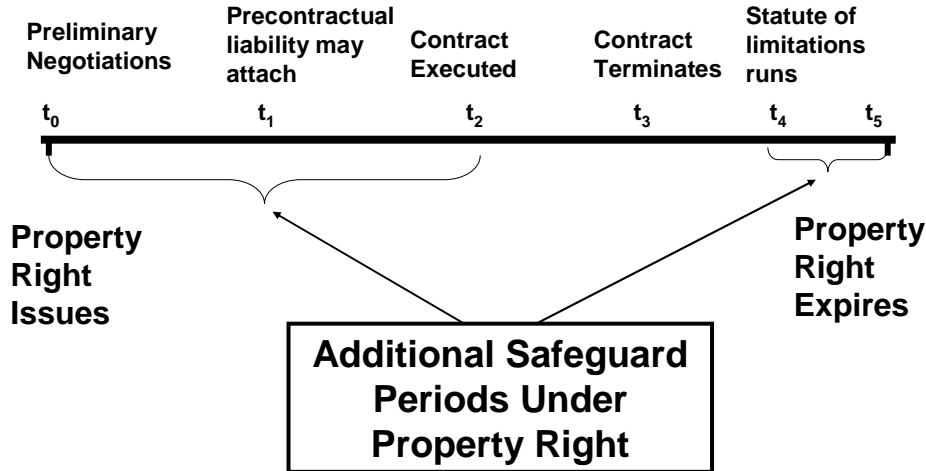
Patents give firms like On-line an important weapon when precontractual negotiations break down. Knowing this, such a firm is more likely to pursue deals, making necessary disclosures along the way. Whatever the vagaries of proving a trade secret claim, if a negotiating partner such as BPE later enters the market with similar technology, the patent gives a firm like On-line a chance to stop them, or at least obtain some compensation. A patent in these circumstances thus undoubtedly makes it a bit easier for a firm like On-line to enter into preliminary negotiations in the first place, and thus, a bit more likely that it will do so.

Many other cases back this up. Taken together, they show definitively that when a disclosing party has a patent, it has a much better chance of legal relief in the event his or her disclosure results in unauthorized market entry. The lesson, once again, is simple but important: property rights serve a crucial transactional role.

III. Enforcement Flexibility

A contracting party with a property right has far more options than one without. He or she can often bring suit for breach of contract, or for infringement; before or after termination of a licensing contract; for contract or infringement damages, whichever is higher; in state or federal court; against parties or non-parties to the contract; and under a shorter (contracts) or longer (patent law) statute of limitations. Collectively, these advantages give a great deal of enforcement flexibility to property holders who have entered into contracts.

Notice that several of these advantages have a temporal dimension. These features are combined with the analysis of Section II, on Precontractual Liability, and depicted in the following figure, which compares the protections afforded sellers under contract with those made available by a property right:



In this section, we take up those advantages not primarily connected to the precontractual period: those that accrue from contract execution (t_2 in Figure 5) to the running of the statute of limitations (t_5).

A. Breach versus Infringement Suits: Strategic and Practical Advantages of Increased Flexibility

Many of the enforcement options that come with property rights stem from the ability to sue for either breach of contract or infringement.⁷³ (Without a property right,

⁷³ Henry v. AB Dick, 224 U.S. 1 (1912); Dow v. U.S., 36 Fed. Cl. 15 (1996).

obviously, the only enforcement option is for breach of contract.)⁷⁴ Courts may require that the contracting party choose one or the other cause of action in a given lawsuit,⁷⁵ but there is support for a party's right to pursue *both* types of cases in separate forums.⁷⁶ The only requirement for federal jurisdiction is that the patentee must normally terminate the licensing agreement before filing suit.⁷⁷

To see the practical advantages of this increased flexibility, it is best to consider some actual situations where parties chose one option over the other.

1. Infringement Over Contract: Strategy and Sample Cases

⁷⁴ *See, e.g.,* Beghin-Say Int'l, Inc. v. Rasmussen, 733 F.2d 1568 (Fed. Cir. 1984) (Where a firm that had commissioned research from a contract researcher sought to establish the enforceability of pre-invention assignment agreements, state contract law was its only recourse; with no federal property rights yet in existence, there was no federal court jurisdiction.).

⁷⁵ *See, e.g.,* De Cew v. Union Bag & Paper Corp., 57 F.Supp. 388 (D.N.J. 1944). Some cases speak in terms of an "election principle," as in "waive the tort, sue in assumpsit." *See, e.g.,* Sims v. Jadin, 135 F.Supp. 917, 918 (E.D. Wis. 1955). This is most usually applied to limit the plaintiff to one species of damage claim, however. *See* York v. Stromman, 105 Cal. App. 2d 586, 234 P.2d 134 (2d Dist. Ct. App. Cal. 1951). Despite this usage, there is no true "election" rule that applies in these cases. *See* Applera Corp. of Applied Biosystems Group v. Illumina, Inc., 282 F.Supp.2d 1120 (N.D.Cal. (denying defendant's motion to stay federal court action pending outcome of state contract lawsuit); *cf.* Del Ricchio v. Photochart, 268 P.2d 814 (Cal. Ct. App. 1954) (suit under patent license agreement does not automatically terminate the agreement, an event which would cut off right to sue for breach and trigger standing to sue for patent infringement).

⁷⁶ *See, e.g.,* Applera Corp. of Applied Biosystems Group v. Illumina, Inc., 282 F.Supp.2d 1120 (N.D.Cal. (refusing concurrent state and federal jurisdiction is "a rare occurrence").

⁷⁷ *Air Prods. & Chems., Inc. v. Reichhold Chems. Inc.*, 755 F.2d 1559 (Fed. Cir. 1985). *See also* Gen-Probe, Inc. v. Vysis, Inc., 70 U.S.P.Q.2d 1087 (Fed. Cir. 2004) (federal court does not have jurisdiction as long as licensing agreement is still in effect); *Metabolite Labs, Inc. v. Laboratory Corp. of Am. Holdings*, 71 U.S.P.Q.2d 1081 (Fed. Cir. 2004) (same). *Cf.* *Krantz v. Van Dette*, 165 F.Supp. 776 (N.D. Ohio 1958) (post-termination events can only sound in patent law where licensor terminates the license itself).

Sometimes, patent infringement litigation may have a higher expected payoff as compared to suit under a contract. To begin, a successful infringement suit may lead to higher damages for one of two reasons. Infringement damages, assessed after the termination of a licensing agreement, may exceed what the corresponding damages would have been in a suit for breach of contract. Also, a patentee can collect up to treble damages if there is proof that the infringement was willful.⁷⁸ Finally, a successful patent infringement plaintiff may collect attorney fees in an “exceptional” case,⁷⁹ while attorney fees are rarely awarded in contracts suits.

The plaintiff in *Wisconsin Alumni Research Foundation v. General Co.*⁸⁰ illustrates the point. WARF sued GE under two separate theories: breach of a licensing agreement, and patent infringement for the period after WARF terminated the agreement.⁸¹ The district court awarded damages for breach of contract at the contract royalty rate of 2%, but awarded infringement damages based on a 3.5% royalty rate.⁸² The upshot was that WARF benefited from advantageous patent law rules to obtain higher damages than it would have if it had sued only under the contract.

As the *WARF* case shows, there can be affirmative reasons to file suit for infringement rather than breach of contract. Another reason is that a plaintiff may face obstacles in mounting a breach of contract suit. There may be a lack of contractual privity

⁷⁸ See 35 U.S.C. § 284.

⁷⁹ See 35 U.S.C. § 285.

⁸⁰ 880 F.Supp. 1266 (E.D. Wis. 1995).

⁸¹ The option to terminate a licensing agreement is an important aspect of the licensor’s enforcement flexibility, because termination confers standing to sue for infringement. With an agreement still in effect, there can be only breach, and not infringement. See *Gen-Probe Inc. v. Vysis Inc.*, 70 USPQ2d 1087 (CA FC 2004). Sometimes specific contract language allows a licensor to terminate under certain circumstances. See, e.g., *National Rejectors, Inc. v. A.B.T. Mfg. Corporation*, 184 F.2d 612 (7th Cir. 1950) (patent licensing agreement provided for a right to terminate at the end of a specified period to cure inadequate performance under the agreement). In any event, material breach by the licensee justifies termination. See, e.g., *Metabolite Laboratories, Inc. v. Laboratory Corp. of America Holdings*, 370 F.3d 1354, 1370 (Fed. Cir. 2004).

⁸² 880 F.Supp. 1266, 1274, 1276.

with one or more of the defendants, for example. Or the statute of limitations may bar a breach of contract suit. The issues are complex enough to merit a brief summary.

a. Contractual Privity

Privity issues arise frequently in licensing cases. This is partly a result of the fact that many licensing negotiations involve more than two parties.⁸³ These negotiations can be complex, with parties coming in and out of the picture over time. Any agreement that is finally reached may leave out one or more of the parties who were involved along the way. Firms may also participate in the development of a technology without ever intending to enter into a contract, typically by assisting one of the firms that is a party to the contract.⁸⁴ Other cases grow out of distribution or supply chain arrangements in which one firm takes a product through one stage of production, and then hands it off to another firm further down the chain.⁸⁵ This way of making things exposes each firm's technology to the risk of misappropriation by other firms down the chain – possibly

⁸³ *See, e.g.,* Water Technologies Corp. v. Calco Ltd., 850 F.2d 660 (Fed. Cir. 1988) (industry consultant representing potential licensee negotiated with patent owner and its licensee); Mixing Equip. Co., Inc. v. Innova-Tech, Inc., 9 U.S.P.Q.2d 1057 (E.D.Pa. 1988) (patent licensor involved in multiple negotiations/disclosures with licensee and sub-licensee; licensee makes allegations of trade secret disclosure by licensor to sub-licensee; court dismisses trade secret cause of action by licensee against licensor and sub-licensee).

⁸⁴ *See, e.g.,* Lisle Corporation v. Edwards, 227 U.S.P.Q. 894 (Fed. Cir. 1985) (three parties: designer/patentee; licensee; and licensee's customer); Ellison Ed. Equip., Inc. v. Chen, 2004 WL 3154592 (C.D. Cal. Dec. 21, 2004) (four primary parties: plaintiff, alleged co-inventor of technology growing out of a preliminary negotiation with eventual patentees/individual defendants; partner of patentees/individual defendants; and two companies with whom patentees/individual defendants had been doing business); Vapor Corp. v. Westcode Inc., 12 USPQ2d 1218 (E.D.Pa. 1989) (three parties: trade secret owner; customer to whom it made disclosures; and competitor with whom customer allegedly shared disclosures).

⁸⁵ *See, e.g.,* Key West Hand Print Fabrics, Inc. v. Serbin, Inc., 269 F.Supp. 605, 612 (S.D. Fla. 1965) (copyright case: plaintiff fabric design firm sues dress manufacturer for copyright infringement and trade secret misappropriation; trade secret claim dismissed because designer was not in privity with, and had no confidential relationship with, dress manufacturer; manufacturer dealt only with purchaser of fabric designs, who purchased fabric designs and turned them into designs for dresses).

including some with whom they have no contract. Thus in a production scenario where A hands off to B who hands off to C, A and B may have a contract, as well as B and C, but perhaps not A and C. Although there may be extensive dealings between A and C, direct or indirect, there is no formal contractual relationship on which to base a legal claim. Patent infringement – a cause of action grounded in property rights – is the only option.⁸⁶

A case in point is *Water Technologies Corp. v. Calco Ltd.*⁸⁷ A company called Aqua-Chem held rights in certain patents on resins used for water purification. Aqua-Chem granted an exclusive license to Water Technologies Corporation (“WTC”). An industry consultant named Gartner, acting on behalf of another company, approached Aqua-Chem to negotiate a license. Those negotiations broke off. Gartner then developed an alternative technology which he in turn licensed to a company called Calco. When Calco introduced a product that competed with WTC’s, WTC brought suit for patent infringement (against Calco and Gartner) and misappropriation of trade secrets (against Calco, Gartner and WTC’s licensor, Aqua-Chem). A district court found for plaintiff on all counts. The Federal Circuit affirmed on the patent infringement claim, but reversed with respect to misappropriation, stating that “the facts here do not establish a claim by [WTC] distinct from its patent infringement claim.”⁸⁸ The problem was that Gartner was

⁸⁶ Cf. *RustEvader v. Cowatch*, 842 F.Supp. 171, 173 (W.D. Pa. 1993), where the court, in a breach of contract case based on misappropriation of technology, observed:

[Plaintiffs] fail to explain how this case arises solely out of a contract when one of the defendants, Cowatch Sr., is not a party to the contract in question. Plaintiffs have not cited any authority for such a proposition and have failed to address, in any way, defendant Cowatch Sr.'s presence in this action. In fact, plaintiffs do not assert anywhere in their complaint that Cowatch Sr. breached any contractual provision . . . [and thus] the plaintiffs are seeking relief against . . . a party not in privity with plaintiffs . . .

⁸⁷ 850 F.2d 660 (Fed. Cir. 1988).

⁸⁸ 850 F.2d at 671 (footnote omitted):

We must agree with Calco and Gartner, therefore, that the district court erred in holding them liable to [WTC] for unfair competition [i.e., misappropriation of trade secrets]. The only claim established by appellees against appellants is patent infringement under 35 U.S.C. § § 271(a) and (b) (1982). Although a distinct cause of action for unfair competition may arise in a factual context which also gives rise to a patent infringement claim, the facts here do not establish a claim

never party to the Aqua-Chem/WTC license, nor was Gartner ever in a direct confidential relationship with WTC. Thus even though Gartner learned of WTC's technology from a party with whom WTC was in a contractual relationship (Aqua-Chem), WTC had no contractual privity with Gartner himself. The advantage of a property right in this context is manifest: without a patent, WTC would have had no tenable cause of action against Gartner and his licensee, Calco.

b. Statute of Limitations

Privity issues once again show that, compared to rights under contract, property rights are robust. Another doctrine demonstrates the same thing: the statute of limitations. Patent law's property-derived limitations period is quite long compared to the typical statute of limitations applied to contracts disputes. As with the other issues discussed earlier, this adds another small degree of flexibility to the property right holder engaged in a contract-related dispute.

Contracts cases are usually subject to general civil suit limitations periods, which typically range from three to five years.⁸⁹ Where a patent licensing dispute is cast as a contracts action, this is the applicable statute of limitations. Misappropriation of trade secrets usually has a similarly short limitations period.⁹⁰ While in many cases this is clearly an adequate period in which to bring a claim, sometimes a patentee-licensor shows more patience. Patent law indulges this option with a much longer limitations

by [WTC] distinct from its patent infringement claim, which in itself is not a state unfair competition claim. Accordingly, we reverse the district court on this issue and remand with instructions to vacate the judgment to the extent that it upholds [WTC]'s unfair competition claim and includes an award of damages thereon.

⁸⁹ *See, e.g.*, *Studiengesellschaft Kohle mbH v. Hercules Inc.*, 18 USPQ2d 1773, 1777 (D.Del. 1990) (citing Delaware's three year statute of limitations for contract actions, in context of patent licensing dispute).

⁹⁰ *See, e.g.*, *Dual, Inc. v. Lockheed Martin Corp.*, 383 Md. 151, 157, 857 A.2d 1095, 1098 (Ct. App. Md. 2004) (three year limitations period for trade secret action in Maryland; various tolling theories discussed).

period, which the patentee can use to advantage simply by terminating the licensing agreement and bringing an action for patent infringement.

Properly speaking, there is no statute of limitations in the Patent Act. There is, however, a six year limit for collection of damages; an infringement suit must be filed within six years of the infringing activity for the patentee to collect damages; otherwise, he or she can only get an injunction.⁹¹ But the six year period also creates a presumption of laches. Plaintiffs who wait more than six years must introduce evidence to justify the long delay in filing suit; if they fail to persuade that delay was reasonable, their claim will be barred.⁹² On the other hand, ongoing licensing negotiations can provide a justification for delay, thus overcoming the presumption of laches.⁹³ So in the context of interest to us, licensing situations, there can be a very long effective limitations period. This of course makes patent infringement attractive in cases where the plaintiff has delayed filing suit for an appreciable period of time.

*Dataq, Inc. v. Tokheim Corp.*⁹⁴ is just such a case. Dataq was a small company developing electronically-controlled gas pumps for filling stations. When a large company called Tokheim expressed an interest in possibly acquiring Dataq, the two companies signed a confidentiality agreement. Dataq and Tokheim negotiated for two years, all the while exchanging information in the manner described in section II above. Tokheim eventually backed out of the acquisition, however, and the nondisclosure agreement expired. When Tokheim introduced a product incorporating many of the features Dataq had invented and disclosed, Dataq filed suit for breach of contract and patent infringement.

⁹¹ 35 U.S.C. § 286.

⁹² *A.C. Aukerman & Co. v. R.L. Chaides Constr. Co.*, 960 F.2d 1020 (Fed. Cir. 1992) (in banc).

⁹³ *See A.C. Aukerman & Co. v. R.L. Chaides Constr. Co.*, 960 F.2d 1020, 1033 (listing “negotiations with the accused [infringer]” as one factor to be considered in reasonableness of delay). *Cf. Gasser Chair Co. v. Infanti Mktg. Corp.*, 60 F.3d 770, 774 (Fed. Cir. 1995) (negotiation of possible “settlement”/license one factor in holding patentee’s delay in bringing suit not unreasonably long).

⁹⁴ 736 F.2d 601 (10th Cir. 1984).

Under the Oklahoma statute that applied to the case, a plaintiff has five years within which to file a claim. The nondisclosure agreement signed by Dataq and Tokheim expired by its terms in 1971, and the contract action was filed in 1978. Although Dataq argued that the statute should be tolled in this case for various reasons, the Tenth Circuit upheld the trial court's grant of defendant's directed verdict motion on the contracts claim. "The evidence produced at trial," the court wrote, "and any inferences drawn from it clearly supports the trial court's findings that 'something may have been amiss concerning the Defendant's obligations under the confidentiality agreement' by November of 1972."⁹⁵ Thus even with tolling, plaintiff would have had to file the contract action by 1977 to stay inside the limitations period.

The patent infringement action survived. Indeed, the Tenth Circuit reversed the district court's directed verdict for defendant on the infringement issue.⁹⁶ The case was remanded for full consideration of the plaintiff's arguments regarding patent validity. For our purposes, the key point is simply that the plaintiff's infringement action gave it additional ammunition in pursuing relief from the violation of its contract with defendant.

2. Contract over Infringement: Strategy and Sample Cases

Given the virtues of infringement suits, it might seem puzzling that anyone with a patent would prefer to sue for breach of contract. But contract suits too have their advantages – two in particular. The most important is that a patent cannot be invalidated in contract litigation, whereas this is always a risk in a suit for patent infringement. A second advantage is the superior expertise of state courts in dealing with contracts. Although federal courts may entertain licensing disputes under diversity jurisdiction, it is easy to see why litigants might prefer state courts: 96% of all contracts cases are heard in state courts.⁹⁷ This explains why a plaintiff may well seek out the higher contracts-related

⁹⁵ 736 F.2d at 604 (quoting trial record).

⁹⁶ 736 F.2d at 604.

⁹⁷ See Marc Galanter, *Contract in Court: or Almost Everything You May or May Not Want to Know about Contract Litigation*, 2001 WIS. L. REV. 577, 585 (2001) (graph showing data regarding state

expertise of a state court tribunal. Whatever their motivations, patentees do sometimes choose to litigate in state courts. And federal courts by and large cooperate: defendants who attempt to remove these actions to a federal forum usually lose, as long as the complaint is crafted so as to avoid direct consideration of patent validity or infringement.

*In re Oximetrix*⁹⁸ is a case in point. A company called Shaw Associates (Shaw) had exclusively licensed its intravenous equipment technology – including “patented and unpatented inventions, prototypes, plans, trade secrets, know-how, and other information” – to Oximetrix.⁹⁹ After eight years of working within the agreement, Oximetrix informed Shaw that it would no longer be paying royalties.¹⁰⁰ Shaw then sued for breach of contract in California state court. After a three month trial, the state trial court found Oximetrix to be in breach of the agreement, and ordered it to pay damages to Shaw. Shaw asked for removal to federal district court, on the ground that the suit involved issues of patent law appropriate only for the federal forum. The Federal Circuit upheld the district court’s denial of the Oximetrix removal motion, pointing out that “the

and federal contracts filings; as of 1998, state court filings numbered roughly 200,000, and federal court diversity filings roughly 8000). *See also* National Center for State Courts, *Examining the Work of State Courts 2003* (2003), at 23, 25 (examining recent trends in contracts case filings in state courts; data at p. 23 show contracts filings totaled more than 350,000 in the 17 states whose data through 2002 are collected in the statistics), avail. at http://www.ncsconline.org/D_Research/csp/2003_Files/2003_SubCivil-TORTCON.pdf. *Cf.* Lawrence Gene Sager, *Insular Majorities Unabated: Warth . Seldin and City of Eastlake v. Forest City Enterprises, Inc.*, 91 HARV. L. REV. 1373, 1424 (1978) (describing “the comparative advantages of state courts as forums for the resolution of zoning disputes”; “[t]he federal courts, after all, are inexperienced in land use litigation; they lack familiarity with local zoning processes, and with the infrastructure of state court zoning decisions, state enabling legislation, and state constitutional constraints, which in combination produce a package of zoning law and practice which may vary considerably from state to state.”).

⁹⁸ 748 F.2d 637 (Fed. Cir. 1984).

⁹⁹ 748 F.2d at 639.

¹⁰⁰ To be precise, Oximetrix said it would only pay royalties on *patented* SA technology that Oximetrix was currently using – which, Oximetrix concluded, was none of it. *Id.*

complaint [filed by Shaw] spoke only of contract claims. It said not a word about infringement.”¹⁰¹

Oximetrix also exhibits another favorable feature of state court actions for patentees. The court there enjoined *Oximetrix* from “using the patented *inventions* of the agreement, whatever may eventually be the fate of the patents.”¹⁰² Because the license in *Oximetrix* covered patented and unpatented technology, the state court crafted a remedy that effectively compensated Shaw for the misuse of both – without, of course, Shaw having to put its patents at risk of being invalidated. Other cases show that when patent and contract issues intertwine, patentee-licensors sometimes find state courts to be a very favorable forum. This was true for example in the California case of *Seagren v. Smith*,¹⁰³ where a state court ordered relief for post-termination violations of a licensing agreement. (Normally, termination of a licensing agreement ends the contractual relationship, and with it any basis for prospective relief.) The court found the defendant “liable . . . upon the theory of implied contract based upon the well-recognized and settled principle that a person shall not be permitted to enrich himself unjustly at the expense of another.”¹⁰⁴ This prospective injunction against violation of its now-terminated agreement bears a striking resemblance to a state court injunction against patent infringement.

State courts in contract cases can occasionally do even more. At times they can help plaintiffs more than a federal court, with the help of careful contract drafting. A license agreement drafted before a patent application has issued may for instance give an inventor the right to royalties even if the application is rejected by the Patent Office.¹⁰⁵ The same goes for a well-drafted contract covering an application that ripens into a patent

¹⁰¹ 748 F.2d at 642.

¹⁰² 748 F.2d at 642 (emphasis in original).

¹⁰³ 147 P.2d 682 (Cal. Ct. App. 1944).

¹⁰⁴ 147 P.2d at 741.

¹⁰⁵ *Beattie v. Prod. Des. & Engineering*, 173 U.S.P.Q. 757, 758 (Minn. Sup. Ct. 1972) (agreement for payment of 3% royalty “of the product or products covered by the claims of the patent application”; held, issuance of patent was not a condition precedent to payment of royalties); *Sunday v. Novi Equip. Co.*, 287 N.W. 909 (Mich. Sup. Ct. 1939).

later found to be invalid.¹⁰⁶ Notice that in such cases the patent becomes largely irrelevant after serving a “matchmaking” function. The parties are drawn into negotiations, under the penumbra of (potential) patent protection; once an agreement is reached, the ultimate validity of the property right becomes almost irrelevant. These “disappearing patents” lay bare the contract-facilitating face of patent law better than anything else.

B. Summary: Enforcement Flexibility is in the Details

The table below summarizes the respective advantages of patent infringement and breach of contract actions.

Infringement	Breach
Higher Damages (sometimes)	Expertise of State Courts
Attorney Fees (sometimes)	Patent Validity not at Risk
No Privity Required	Recovery Despite Abandoned or Invalidated Patent (sometimes)

¹⁰⁶ Heltra, Inc. v. Richen-Gemco, Inc., 185 U.S.P.Q. 810, 814 (D.S.C. 1975) (interpreting South Carolina law; finding that parties intended royalties to be paid so long as “the basic concept of the . . . apparatus purchased was used in producing the defendant’s . . . machines regardless of whether a patent covering the device subsequently issued or not.”); Eno v. Prime Mfg. Co., 50 N.E.2d 401, 407 (Mass. Sup. Ct. 1943), and cases cited therein.

IV. Why Should We Care About All This? The Transaction-Intensive Landscape of the New Economy

The reason all this matters is that in the new economy, the volume of transactions is expected to increase dramatically.¹⁰⁷ Headlines proclaim the era of outsourcing, downsizing, and “nimble firms.” Theorists talk about the end of the twentieth century production model where most industries were dominated by a small handful of massive, fully integrated firms.¹⁰⁸ In the new “modular” economy that some see emerging, many independent firms sell specialized goods and services that can be assembled and configured in different ways to meet the needs of various markets. Gone is the large, vertically integrated firm that gathered all the resources – physical, intellectual, and human – needed to produce a given item.¹⁰⁹ This older type of firm was masterfully (and

¹⁰⁷ See Robert Pitofsky, *Antitrust and Intellectual Property: Unresolved Issues at the Heart of the New Economy*, Remarks at the Antitrust, Technology and Intellectual Property Conference, Berkeley Center for Law and Technology, University of California, Berkeley (Mar. 2, 2001) (transcript available at <http://www.ftc.gov/speeches/pitofsky/ipf301.htm>):

The essential feature that is new about the “New Economy” is its increased dependence on products and services that are the embodiment of ideas....In each of these areas, the “product” or “service” is a piece of intellectual property -- for example, a line of computer code, a new connecting device to make routers and servers more efficient, or new knowledge about genetic profiling that facilitates the use of gene therapy products to treat disease.

¹⁰⁸ See, e.g., Richard N. Langlois, *Chandler in a Larger Frame: Markets, Transaction Costs, and Organizational Form in History*, 5 ENTERPRISE & SOCIETY 355 (2004); Richard N. Langlois, *The Vanishing Hand: The Changing Dynamics of Industrial Capitalism*, 12 IND. & CORP. CHANGE 351 (2003); Naomi R. Lamoreaux, Daniel M. G. Raff, and Peter Temin, *Beyond Markets and Hierarchies: Towards a New Synthesis of American Business History*,” 108 AM. HIST. REV. 404 (2003).

¹⁰⁹ See, e.g., Luigi Zingales, *In Search of New Foundations*, 55 J. FIN. 1623 (2000):

[T]he traditional business corporation, which emerged at the beginning of the twentieth century . . . is a very asset-intensive and highly vertically integrated firm, with a tight control over its employees—control that is concentrated at the top of the organizational pyramid. . . . Not any more. The nature of the firm is changing. Large conglomerates have been broken up, and their units have been spun off as stand-alone companies. Vertically integrated manufacturers have relinquished direct control of their suppliers and moved toward looser forms of collaboration.

meticulously) described by Harvard’s Alfred Chandler, the business historian *par excellence*.¹¹⁰ Thus the label given to the new, modular firms by a younger generation of scholars: Post-Chandlerian. As these theorists point out, these “dis-integrated” firms have replaced intrafirm coordination with firm-to-firm coordination. To revert to the language of Oliver Williamson, they replace centralized “hierarchies” with decentralized “markets.” While there is some debate over the exact *nature* of coordination in the new modular economy, all agree that this way of doing things does demands more firm-to-firm interaction – broadly speaking, more transactions. Obviously: when production is broken up and parsed out among more separate firms, transactions of some kind are required to assemble the components into a final product.

Transactions are not quite the same as contracts, however. For instance, some products can be designed so that one firm’s component simply plugs into another. This “hard-wired modularity” reduces transactions to a simple matter of interface protocols. Not all products work this way, of course. But even when coordination cannot be engineered into components, and must be actively arranged, it can sometimes be achieved informally, without resort to legally enforceable contracts. The Japanese industrial groups, keiretsu, are comprised of individual firms that operate quite effectively together without formal legal bonds. A large body of “institutional” economics studies similar arrangements. This research shows how rules emerge to govern interactions among economic actors who deal with each other repeatedly. These rules range from binding laws and contracts to informal norms; the only constant is that they provide effective governance and incentive systems for individual actors.

Thus contracts are not necessarily required for firms to interact effectively. So too with property rights. In some settings economic institutions take shape without the presence of formal property rights. De facto or informally recognized claims – what might be considered “quasi-property” rights – are enough to get things going. The

Human capital is emerging as the most crucial asset. As a result of these changes, the boundaries of the firms are in constant flux

¹¹⁰ See ALFRED D. CHANDLER, *SCALE AND SCOPE: THE DYNAMICS OF INDUSTRIAL CAPITALISM* (1994); ALFRED D. CHANDLER, *THE VISIBLE HAND: THE MANAGERIAL REVOLUTION IN AMERICAN BUSINESS* (1980).

standard example is municipal water districts, as described in the pioneering research of Elinor Ostrom.¹¹¹ Recently, several scholars have argued that medieval craft guilds exhibit some of the same characteristics, including a foundation in informally-recognized “trade secrets.”¹¹² In other cases, property rights are essential to institutions. Patent pools and standard-setting organizations are good examples, as are “collective rights organizations” that assemble copyrights for blanket licensing to the radio and TV industries.

This brief survey of institutions has one point: when it comes to harnessing the work of disparate firms, property rights and contacts are not the only game in town. Institutions emerge from all sorts of backgrounds. This has been true in the past, and will no doubt continue to be true as the new economy takes shape. Even so, *some* firms will handle the increased need for coordination with formal contracts.¹¹³ And some of these will be helped along by formal property rights. In other words, these formal legal instruments are not the only way for firms to effectively interact; but they are tried and true ways. We can expect that they will be pressed into service with increasing frequency

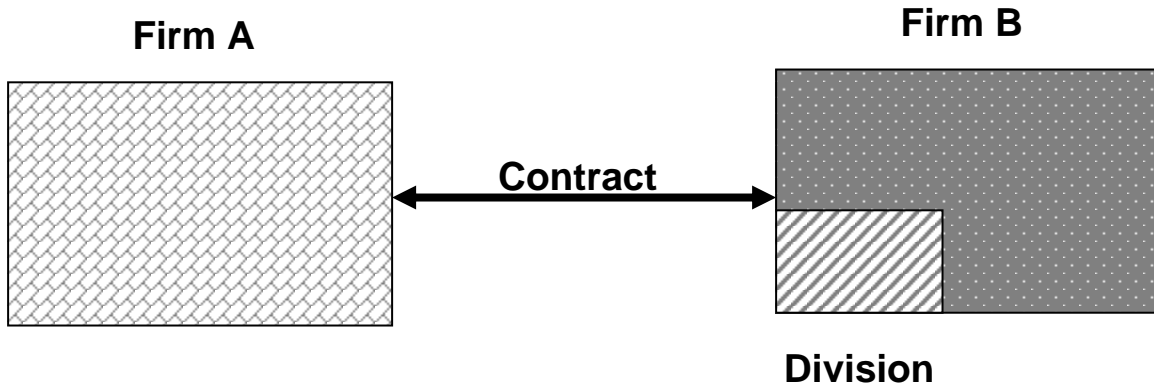
¹¹¹ ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* (1990)

¹¹² Stephan R. Epstein, *Property Rights to Technical Knowledge in Premodern Europe, 1300-1800*, 94 AM. ECON. REV. 382 (Pap. & Proc.) (2004); Robert P. Merges, “From Medieval Guilds to Open Source Software: Informal Norms, Appropriability Institutions, and Innovation,” Working Paper, Nov. 13, 2004, avail. http://papers.ssrn.com/sol3/papers.cfm?abstract_id=661543. See also Stephan R. Epstein, *Craft, Guilds, Apprenticeship, and Technological Change in Preindustrial Europe*, 58 J. ECON. HIST. 684 (1998).

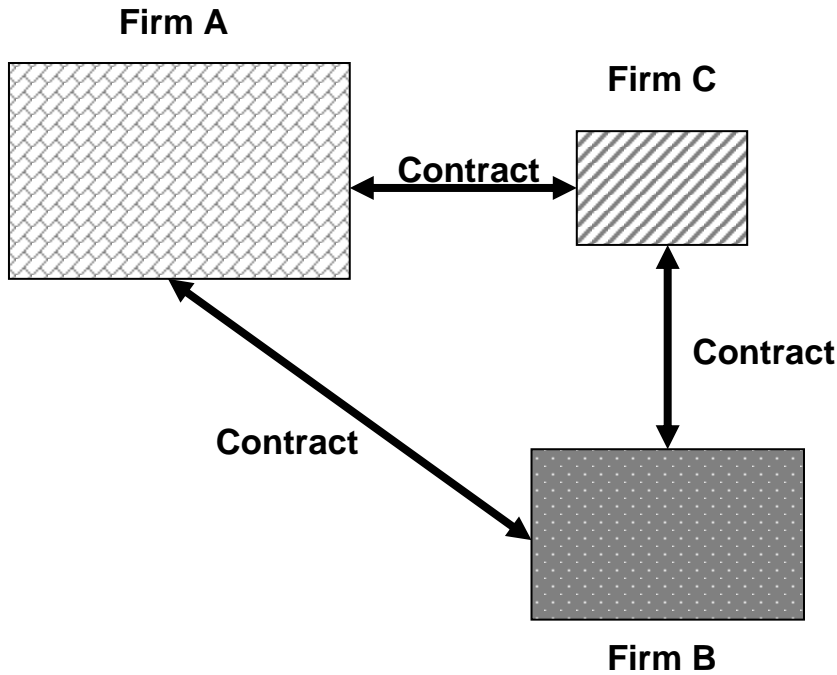
¹¹³ These institutions typically take shape over time among firms that repeatedly interact with each other. They are therefore not available to non-repeat players, or to firms that are first beginning to do business together. Secondly, the norms and other “rules of the game” for these institutions are often fairly “soft” constraints. While they work at times under some circumstances, they are not always as reliable as contracts. Take the example of open source software, in many ways today’s most visible experiment in informal coordination. Open source has an uncertain future, despite the loyalty of many programmers who contribute their time and energy. The norms that hold these communities together are in some ways fragile. The entry of for-profit firms may affect the willingness of firms and individuals to continue their participation. Private firms do contribute to open source projects, but they have their own strategic reasons for doing so.

in the new economic landscape. Whether they will be the dominant form of “private ordering” – as some believe they were in the pre-Chandlerian era – is not for me to answer. I am confident that they will increase in importance. That is enough to justify my attention in this Essay to the way they interact.

A few diagrams may help clarify the point. The figure below represents a typical “old economy” scenario, with Firm A buying something from Firm B. A wholly owned division of Firm B is assigned the task of adapting Firm B’s product to the needs of Firm A. (Think of Firm B as selling an assembly line component that must be integrated into Firm A’s complex assembly line.)



Now imagine that Firm B has “downsized,” by “spinning off” this division as a separate firm, Firm C. Firm B now “outsources” the work formerly done by its division to this new Firm C. Because Firm C will be privy to sensitive information about both Firm A’s assembly line and Firm B’s manufactured components, and because Firm C may consider its adaptation techniques and technologies proprietary, it will enter into agreements with both Firm A and Firm B. As primary buyer and seller, Firms A and B will probably still want to enter into a contract with each other. The upshot for our purposes is an additional set of transactions, as illustrated in the following figure.



This schematic illustration of what might be called the “dis-integration” of production describes a reality playing out in scores of industries in the contemporary economy. For my purposes, this trend matters because it points to an increase in the number of arm’s-length transactions. More and more firms that were divisions of other firms, or would have been under the old production model, are now independent. Stages of production that formerly were coordinated from within a single large firm are being broken up and spread across more firms. Interactions governed in the past by internal firm fiat are being replaced by arm’s-length contracting. The new economy is simply much more transaction-intensive than the old one it is quickly replacing.

This suggests a bigger role for property rights. For all the reasons documented in parts II and III above, property rights play an important role in facilitating contracting. They make it easier for the welter of firms to approach one another and begin early-stage disclosure and negotiation. They provide more remedial options, more secure safeguards,

after a contract is signed. All of which eases the contracting process so crucial to economic activity in a more dis-integrated industrial landscape.

V. Conclusion

In an economy where contracting is becoming more pervasive, property rights invest contractual exchange with an important dimension. At the initial stage, they facilitate precontractual negotiations. After a contract is signed, they give contracting parties numerous additional enforcement options which, in the aggregate, confer considerable flexibility. In sum, they are valuable adjuncts at every stage of the contracting process.

After all this talk of hard-headed economic rationality, let me end with some observations on anonymity and intimacy. Property rights bring the power of the state to bear on relations between legal “strangers.” By specifying a holder’s rights “against the world,” they create an off-the-rack, mandatory legal relationship between the rightholder and everyone else. Contracts are completely different. A contract signifies a close, voluntary relationship between assenting parties – what one might call a legally “intimate” relationship. What I have been trying to do in this Essay is to first describe how property works in the hinterland, the transition zone, between legal strangers and legal intimates. Next I have shown how, once parties cross the bridge between the anonymity of property and the intimacy of contract, property continues as an important presence in the relationship. Property ownership gives a contracting party many small additional options that become collectively valuable if the contract goes bad – if enforcement becomes necessary. And so the power of the state-backed property right continues to exert influence even after legal actors are no longer strangers.

Viewed in this light, property and contract are no longer a dichotomous pair. They can be seen to work together toward a common end: the promotion of voluntary, bilateral contracting. Given the rising importance of contracts in the new economy taking shape around us, this harmony at the heart of two of our most basic legal categories seems an important discovery indeed.