

CONTRACTS AS TECHNOLOGY

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If technology means “useful knowledge about how to produce things at low cost,” then contracts should qualify. Just as mechanical technologies are embodied in blueprints, technologies of contracting are embodied in contractual documents that serve as “blueprints for collaboration.” This Article analyzes innovations in contractual documents using the same kind of framework that is used to analyze other kinds of technological innovation. The analysis begins by laying out an informal model of the demand for and supply of innovative contractual documents. The discussion of demand emphasizes the impact of innovations upon not only each party’s incentives to collaborate efficiently, but also upon reading costs and litigation costs. The analysis of supply considers both the generation and dissemination of innovations and emphasizes the importance of cumulative innovation, learning-by-doing, economies of scale and scope, and trustworthiness. Recent literature has raised concerns about the extent to which law firms produce contractual innovations. In fact, a wide range of actors other than law firms supply contractual documents, including end users of contracts, specialized providers of legal documents, legal database firms, trade associations, and academic institutions. This Article discusses the incentives and capabilities of each of these potential sources of innovation. It concludes by discussing potential interventions such as (1) enhancing intellectual property rights, (2) relaxing rules concerning the unauthorized practice of law, and (3) creating or expanding publicly sponsored clearinghouses for contracts.

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INTRODUCTION

Most economists agree that the creation and dissemination of technological innovations is one of the few definite sources of sustained economic growth.¹ Take the case of the garment industry in Bangladesh. In April 1980, a company named Desh Garments Ltd. opened one of the first shirt factories in the country. Desh owed its success in part to its collaboration with a major South Korean textile producer, the Daewoo Corporation. In return for royalties and commissions amounting to eight percent of sales, Daewoo trained Desh employees in how to make shirts and market them to the world. In other words, Daewoo transferred technology to Desh. What were the most critical kinds of technology that Daewoo transferred? The agreement required Daewoo to sell Desh machinery and the technology embodied in that machinery was presumably helpful. But Daewoo provided two other technologies that were critical to Desh’s success: bonded warehouses and back-to-back import letters of credit. The warehouses allowed Desh to obtain imported fabrics duty-free, while the letters of credit helped it to obtain relatively low-cost financing by,

¹ See WILLIAM EASTERLY, *THE ELUSIVE QUEST FOR GROWTH: ECONOMISTS’ ADVENTURES AND MISADVENTURES IN THE TROPICS* 172 (2001) (“Technological change is indeed a powerful force behind economic growth, which is all about creating new goods and new technologies.”). For seminal works, see JOSEPH SCHUMPETER, *THE THEORY OF ECONOMIC DEVELOPMENT: AN INQUIRY INTO PROFITS, CAPITAL, CREDIT, INTEREST, AND THE BUSINESS CYCLE* (1934) (developing a theory in which innovation is central to economic development), and Robert M. Solow, *Technical Change and the Aggregate Production Function*, 39 *REV. ECON. & STAT.* 312, 320 (1957) (concluding that technical change as opposed to capital accumulation was the principal source of change in labor productivity in the United States from 1909–1949).

effectively, posting the payment obligations generated by their sales as collateral.²

To the extent it is about the letters of credit, this story should be an inspiration to contract lawyers. The moral is that contractual innovations are forms of technological progress that can generate economic growth.³ Purists probably would not recognize these kinds of knowledge as forms of technology, preferring to reserve that term for knowledge about how to manipulate the natural world.⁴ But the term “technology” can also be defined more broadly as “[u]seful knowledge about how to produce things at low cost.”⁵ Knowledge about back-to-back letters of credit fits comfortably within this broader definition. And just as innovative mechanical technology can be embodied in a blueprint, innovative contractual technology can be embodied in a contractual document. The contract serves as a “blueprint” for collaboration.⁶

² EASTERLY, *supra* note 1, at 146–50 (citing Yung Whee Rhee & Therese Belot, *Export Catalysts in Low-Income Countries: Preliminary Findings from a Review of Export Success Stories in Eleven Countries* 10–11 (World Bank Indus. & Energy Dep’t Working Paper Indus. Series, Working Paper No. 5, 1989) (attributing Desh Garment Ltd.’s economic success to the technological training it received from Daewoo Corporation).

³ See Mark C. Suchman, *The Contract as Social Artifact*, 37 LAW & SOC’Y REV. 91, 103 (2003) (discussing the merits of the “contract as technology” approach). The basic idea that contracts and contractual innovation can be significant determinants of economic development is consistent with the large body of literature supporting the general proposition that “institutions matter” in economic development. In that literature, the term “institutions” is typically defined expansively to mean the rules of the game that govern social interaction. See Kevin E. Davis, *Introduction*, in INSTITUTIONS AND ECONOMIC PERFORMANCE, at ix, x (Kevin E. Davis ed., 2010). There is a broad consensus that institutions are important determinants of levels of economic development. There is also increasing recognition of the corollary claim that—unless one takes the view that no worthwhile institutions remain to be discovered—the rates at which innovative institutions are developed and diffused will be important determinants of rates of economic development. See *id.* at xv (suggesting that institutional variation can be studied over time to assess the influence on economic growth).

⁴ See, e.g., JOEL MOKYR, *THE GIFTS OF ATHENA: HISTORICAL ORIGINS OF THE KNOWLEDGE ECONOMY* 2–3 (2002) (defining technology as “useful knowledge” of “natural phenomena that exclude the human mind and social institutions”). The Oxford English Dictionary defines technology as “[t]he branch of knowledge that deals with the mechanical arts or applied sciences” 2 THE NEW SHORTER OXFORD ENGLISH DICTIONARY 3235 (Lesley Brown ed., 1993).

⁵ EASTERLY, *supra* note 1, at 150.

⁶ Suchman, *supra* note 3, at 109 (discussing depictions of contracts as “blueprints for resolving common governance challenges”). The idea that contractual innovation might be of economic significance is a subsidiary element of the broader claim that innovation in the organization of economic activity is an important driver of economic growth. As Nelson and Winter point out, Schumpeter appears to embrace this view by refusing to draw—appropriately in their opinion—a sharp distinction between innovation in the mechanical arts and organizational innovation. RICHARD R. NELSON & SIDNEY G. WINTER, *AN EVOLUTIONARY THEORY OF ECONOMIC CHANGE* 38, 277 (1982) (“Schumpeter’s treatment of innovation pre-figures our own emphasis on the error of overdrawing the related

Not all contractual innovations create as much value for society as back-to-back letters of credit. In fact, some may destroy value. Either way, given their potential economic impact it is worth studying who creates them, why, and under what conditions.

Our understanding of the phenomenon of contractual innovation lags behind our understanding of other kinds of technological innovation. Existing literature—with some notable exceptions⁷—focuses heavily on innovations in a single context: widely-used terms of financial contracts, typically bonds or corporate charters, drafted by large U.S. law firms.⁸ An especially prominent recent contribution argues that there are significant obstacles to innovation in this context.⁹

distinctions between technological and organizational considerations . . .”). To illustrate, the technology for constructing a building can be said to encompass both the blueprints that explain the organization of its physical components and the contracts that explain the organization of the actors who will participate in the construction.

⁷ See generally Charles J. Goetz & Robert E. Scott, *The Limits of Expanded Choice: An Analysis of the Interactions Between Express and Implied Contract Terms*, 73 CALIF. L. REV. 261 (1985) (focusing on the tensions between express and implied terms, and the implications for contractual innovations); George G. Triantis, Collaborative Contract Innovation (Apr. 30, 2010) (unpublished manuscript) (on file with the *New York University Law Review*) (describing innovation in various types of organizations and suggesting that peer production might be well suited to the production of innovative contracts).

⁸ Key contributions to the legal literature include: Stephen J. Choi & G. Mitu Gulati, *Innovation in Boilerplate Contracts: An Empirical Examination of Sovereign Bonds*, 53 EMORY L.J. 929, 982–89 (2004) (analyzing innovation in sovereign bonds between 1995 and 2004); Henry T. Greely, *Contracts as Commodities: The Influence of Secondary Purchasers on the Form of Contracts*, 42 VAND. L. REV. 133, 160–66 (1989) (discussing the obstacles to contract standardization); Marcel Kahan & Michael Klausner, *Standardization and Innovation in Corporate Contracting (Or “The Economics of Boilerplate”)*, 83 VA. L. REV. 713, 736–40 (1997) (considering the role of law firms and underwriters in relation to corporate contracts); Michael Klausner, *Corporations, Corporate Law, and Networks of Contracts*, 81 VA. L. REV. 757, 759–67 (1995) (criticizing the conventional law and economics analysis of corporate contracts); Michael J. Powell, *Professional Innovation: Corporate Lawyers and Private Lawmaking*, 18 LAW & SOC. INQUIRY 423, 427–29 (1993) (addressing the ways in which corporate lawyers take part in lawmaking when acting for clients); MITU GULATI & ROBERT E. SCOTT, THE THREE AND A HALF MINUTE TRANSACTION: BOILERPLATE AND THE LIMITS OF CONTRACT DESIGN 53–72 (2013) (considering sovereign bonds and *pari passu* clauses). There is also an extensive literature on the economics of financial innovation. See, e.g., Peter Tufano, *Financial Innovation*, in 1A HANDBOOK OF THE ECONOMICS OF FINANCE 307 (George M. Constantinides, Milton Harris & René M. Stulz eds., 2003) (surveying the literature); Josh Lerner & Peter Tufano, *The Consequences of Financial Innovation: A Counterfactual Research Agenda* (Nat’l Bureau of Econ. Research, Working Paper No. 16780, 2011) (same).

⁹ Gulati & Scott, *supra* note 8, at 180 (“[D]espite the many caveats there remains substantial evidence that the institutional structure of the modern large law firm impedes innovation in contract design.”). *But see* Goetz & Scott, *supra* note 7, at 304–05 (“The feasibility of law firm innovation is illustrated by the widely held belief that bond covenants, indentures, and many other standard features of corporate financial agreements originated in a small group of New York law firms that had a dominant market position in these transactions.”).

The narrow focus of the contemporary literature is unfortunate. There are good reasons to believe that significant amounts of contractual innovation occur outside of financial contracts produced by law firms, and that we should learn more about those forms of innovation. For instance, it would be helpful to know more about innovation generated by users of contracts—that is, the parties bound by them—rather than third-party providers such as law firms.¹⁰ It would also be helpful to know more about other kinds of third-party providers because the distinctive regulatory treatment of law firms gives them both advantages and disadvantages in the supply of innovation.¹¹ For similar reasons, it would be helpful to know more about innovation generated or disseminated for reasons other than direct pecuniary gain, especially by actors such as trade associations and academics.¹² Most importantly, it would be helpful to know more about how contractual innovations become widely used—that is, how and why they are disseminated from the various categories of innovators to both users and other innovators. Innovations in methods of dissemination are particularly in need of attention.

These lines of inquiry all have parallels in the general literature on technological innovation.¹³ There is extensive literature on the respective roles of for-profit research and development on the one hand, and user innovation or academic or government research and development on the other.¹⁴ That general literature also highlights the fact that the impact of innovations depends upon how widely and

¹⁰ A rare example of a study focused on user innovation is Florencia Marotta-Wurgler & Robert Taylor, *Set in Stone? Change and Innovation in Consumer Standard Form Contracts*, 88 N.Y.U. L. REV. 240 (2013) (examining the innovation in consumer standard form contracts over seven years).

¹¹ The challenges alternative providers of legal services pose to law firms are discussed in RICHARD SUSSKIND, *THE END OF LAWYERS?: RETHINKING THE NATURE OF LEGAL SERVICES* (2008). Susskind predicts that “[t]he market . . . will determine that the legal world is inefficiently resourced . . . it will increasingly drive out excesses and unnecessary friction and, in turn, we will indeed witness the end of outdated legal practice and the end of outdated lawyers.” *Id.* at 3. See also Bruce H. Kobayashi & Larry E. Ribstein, *Law’s Information Revolution*, 53 ARIZ. L. REV. 1169, 1171 (2011) (describing the pressure put on big law firms by technological change and global competition).

¹² I have explored the role of trade associations in drafting contracts in earlier work. See Kevin E. Davis, *The Role of Nonprofits in the Production of Boilerplate*, 104 MICH. L. REV. 1075, 1078–81 (2006) (describing and explaining the roles that trade associations play in drafting standard form contracts).

¹³ See Suchman, *supra* note 3, at 117–26 (describing literature on innovation and diffusion, path dependence, and technology cycles and laying out a research agenda for research on parallel aspects of contracts).

¹⁴ On user innovation, see ERIC VON HIPPEL, *DEMOCRATIZING INNOVATION 2* (2005), arguing that user innovation complements the traditional model of manufacturer innovation. For an overview of the respective roles of for-profit firms, universities, and the government in funding and conducting research and development, see SUZANNE SCOTCHMER,

rapidly they are adopted.¹⁵ This demonstrates the need to focus on mechanisms that help people overcome skepticism and fear born of uncertainty about the effects of adopting new products.¹⁶

This Article provides a general model of the demand for and supply of contractual innovations and then surveys the kinds of organizations likely to supply such innovations. Unlike some previous work in this vein, the analysis emphasizes the importance of both the generation and dissemination of innovations. Like previous analyses, it reveals that law firms have limited incentives to generate innovative contracts for use by others.¹⁷ However, there are other potential generators of innovation, including users of contracts, trade associations, and providers of legal databases such as Bloomberg, LexisNexis, and Westlaw. The difficulty is that, except for the trade associations, it is not clear that the potential innovators have appropriate incentives to disseminate their innovations.

This Article proceeds as follows. Part I discusses the factors that determine the value of contracts and, by extension, contractual innovations. Part II shifts to focus on the supply of innovation. It describes mechanisms for both generating innovations and facilitating their adoption through dissemination. Part III uses this analysis as a basis for generating hypotheses about the likely sources of contractual innovation. Part IV briefly discusses implications for public policy, including potential interventions such as enhancing intellectual property rights, relaxing rules concerning the unauthorized practice of law, and creating or expanding publicly sponsored clearinghouses for contracts.

I

THE VALUE OF CONTRACTUAL INNOVATION

A. Overview

Boiled down to its essence, a contract is a mapping which specifies legal obligations that apply to each contracting party in any given

INNOVATION AND INCENTIVES 227–58 (2006), who contends that the private sector is only one of many drivers of growth.

¹⁵ MOKYR, *supra* note 4, at 7 (“Progress in exploiting the existing stock of knowledge will depend first and foremost on the efficiency and cost of access to knowledge.”).

¹⁶ *See id.* at 218–83 (discussing resistance to new technologies based on uncertainty about unintended consequences and other factors).

¹⁷ *See* Gulati & Scott, *supra* note 8, at 180 (“[T]here remains substantial evidence that the institutional structure of the modern large law firm impedes innovation in contract design.”).

state of the world.¹⁸ Each contract is a product of interaction between documents that purport to record the parties' agreements ("contractual documents" or "contracts" for short) and rules used to construe and enforce those documents ("contract law").¹⁹ Innovations in contracting can involve innovations in either contractual documents or contract law.

The focus here is on innovation in contractual documents. Innovation means any change that is both novel and likely to be adopted by a group of prospective users.²⁰ Since innovation often involves using familiar material in a new way, the idea of a "novel" document includes a novel recombination of provisions that are individually familiar. Because the intention here is to capture innovation as opposed to customization, this definition excludes changes that result in documents that are already familiar to the relevant users or which are only of interest to a single set of contracting parties.

To understand the value of contractual innovation, we have to understand the determinants of the value of contracts. In the model set out below, these factors include the incentives created by the contract and the expected enforcement costs. The level of uncertainty about the effects of the contract is also relevant, taking into account the extent to which that uncertainty can be resolved through the passage of time and accrual of precedent, as well as through affirmative efforts to acquire information. Thus, the value of a contract to its parties will reflect the net effect of the behavior it induces, taking into account enforcement costs and the levels of reading costs, investigation costs, and residual uncertainty the parties have chosen to incur.²¹

¹⁸ See Kevin E. Davis, *Interpreting Boilerplate 5* (N.Y.U. Law & Econ. Research Paper Series, Working Paper No. 10-21, 2010), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1618925 (providing a formal model premised on this conception).

¹⁹ See Goetz & Scott, *supra* note 7, at 270 ("Parties implicitly incorporate the standard rules of contract law into their agreement."); Davis, *supra* note 18, at 5–6 (defining model); Lewis A. Kornhauser & W. Bentley MacLeod, *Contracts Between Legal Persons 7*, 14–17 (Nat'l Bureau of Econ. Research, Working Paper No. 16049, 2010), available at <http://www.nber.org/papers/w16049> (defining "contractual instrument," "contract law," and the "exchange environment"); see also Goetz & Scott, *supra* note 7, at 264 ("[T]he prevailing judicial approach to ex post interpretation has far-reaching feedback effects on the operation of the ex ante contractual signalling system.").

²⁰ See Triantis, *supra* note 7, at 4 ("This essay uses the term innovation to describe improvements to contracts that are more significant in degree than tailoring and that can be redeployed in other transactions, and even standardized.").

²¹ In some settings a user will convey information to third parties by adopting a particular contract, so the value of a contract to such an actor will also depend on the value of sending this signal. The analysis below ignores this factor. See Suchman, *supra* note 3, at 100 ("Alongside their technical functions, contract artifacts share important characteristics with certain forms of symbolic representation, as well. As cultural displays, contracts evoke normative principles and illuminate social experiences—at times expressing identity,

A rational actor should decide whether to adopt one contractual document or another based on a rational assessment of these costs and benefits. In practice, this calculation will require a fair amount of guesswork.

B. *Intrinsic Value*

The principal determinant of the value of adopting a contract is the value of the changes in behavior it induces, including enforcement activity, net of the purely mechanical costs of creating the document.²² For example, a contract for the sale of goods gives each party incentives to perform their side of what is (typically) expected to be a mutually beneficial exchange. The incremental benefits of the incentives the contract creates have to be discounted to reflect the expected costs associated with enforcing the contract, taking into account not only the likelihood of a dispute but also the possibilities of either litigation or settlement. In theory, the costs of creating a contractual document also have to be considered. In the days when producing a document involved scribes, or even typewriters and carbon paper, these costs were substantial. In modern societies, the advent of mass literacy, word processors, and scanners has significantly lowered these costs,²³ although in cases involving complex contracts the costs of recording an agreement may not be trivial. For example, in large project finance transactions, which can involve forty or more contracts, the transaction costs can equal five to ten percent of the project's total cost.²⁴

The value of any given contractual document will depend on the environment in which it is used. Perhaps most importantly, the value of a particular document will often depend on the ease with which it can be legally enforced. In some cases, laws prohibit particular types of contracts. For instance, in the United States innovations in contracts for forward sales of onions are essentially valueless because since 1958 such contracts have been rendered legally unenforceable by

solidarity, forbearance, and faith, and at times expressing differentiation, inequality, domination, and distrust.”); see also Anna Gelpern & Mitu Gulati, *Feel-Good Formalism*, 35 *QUEEN'S L.J.* 97, 98–100 (2009) (arguing that business parties intentionally include some unworkable contractual terms because they provide “feel-good” value to the parties).

²² See Benjamin E. Hermalin, Avery W. Katz & Richard Craswell, *Contract Law*, in 1 *THE HANDBOOK OF LAW AND ECONOMICS* 3, 7–12 (A. Mitchell Polinsky & Steven Shavell eds., 2007) (explaining how contracts create valuable incentives to follow through on commitments but specification costs and enforcement costs limit that value).

²³ *SUSSKIND*, *supra* note 11, at 100–05 (explaining how advances in information and communication technology have enabled low-cost automated document assembly).

²⁴ Benjamin C. Esty, *Why Study Large Projects? An Introduction to Research on Project Finance*, 10 *EUR. FIN. MGMT.* 213, 216 (2004).

the Onion Futures Act.²⁵ In many other countries, contracts are not worth the paper they are written on because legal enforcement is prohibitively costly or the outcomes of legal proceedings are radically uncertain. For example, in 2012 the World Bank reported that in Mozambique it would take 730 days to enforce a contract in a hypothetical sale of goods dispute and that the enforcement costs would total 142.5% of the amount claimed. By comparison, in the United States enforcement would require 300 days at a cost of 14.4% of the claim.²⁶ At the same time, in some countries there may be features of the contracting environment which serve as substitutes for certain contractual innovations. Most notably, rather than relying on rules set out in contracts to allocate goods and services, a society might rely upon the internal rules of organizations such as the family, the corporation, or the state to allocate goods and services.²⁷ Societies in which significant amounts of goods and services are allocated within households, within vertically-integrated firms, or by the state will place relatively little value upon contracts or contractual innovations. Vigorous use of implied terms by courts can also serve as a substitute for innovation in contractual documents.²⁸

Contractual innovations can enhance the intrinsic value of a contract in several ways. Some involve specifying new combinations of obligations and thereby opening up new forms of mutually beneficial exchange. For example, Creative Commons licenses allow copyright holders to place more limited sets of obligations on licensees than other licenses.²⁹ The popularity of these licenses suggests that there

²⁵ See Pub. L. No. 85-839, 72 Stat. 1013 (1958) (codified at 7 U.S.C. § 13-1 (2006)) (banning onion futures). More recently Congress has, in the same statutory provision, similarly restricted innovation by prohibiting futures contracts for the sale of motion picture box office receipts, or any index, measure, value, or data related to such receipts. Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 721(e)(10), 124 Stat. 1672 (codified at 7 U.S.C. § 13-1 (2006 & Supp. IV 2011)).

²⁶ *Enforcing Contracts*, WORLD BANK, <http://www.doingbusiness.org/data/explore-topics/enforcing-contracts> (last visited Jan. 30, 2013).

²⁷ See Oliver E. Williamson, *MARKETS AND HIERARCHIES: ANALYSIS AND ANTITRUST IMPLICATIONS* (1975) (describing the use of hierarchical organizations as a response to the costs of market transactions); see also Michael Trebilcock & Jing Leng, *The Role of Formal Contract Law and Enforcement in Economic Development*, 92 VA. L. REV. 1517, 1521, 1576-77 (2006) (discussing characteristics of contractual transactions in primitive societies and small communities).

²⁸ See Goetz & Scott, *supra* note 7, at 290 (noting that well-established processes for implying standardized terms to contracts may lead to an imbalanced bias against innovation); see also Ronald J. Gilson, Charles F. Sabel & Robert E. Scott, *Contract and Innovation*, 88 N.Y.U. L. REV. 170 (2013) (noting that generalist courts “are prone to undermine an emergent innovation by inadvertently failing to extract the correct meaning from the signals that the parties have given”).

²⁹ Creative Commons is a non-profit organization that has created a series of copyright licenses that are an attempt to develop the copyright spectrum between the end points of

are many cases in which the added flexibility is worth less to copyright holders than it is to licensees, thus leading to more mutually beneficial licensing arrangements.³⁰ It can also be useful to change the specification of the states of the world that trigger certain kinds of obligations. Take catastrophe bonds, for instance. These are financial instruments whose payouts are conditioned on the non-occurrence of catastrophic events such as hurricanes or earthquakes.³¹ They are used primarily by insurance and reinsurance companies to transfer the risks of catastrophe-related liabilities to the holders of the bonds.³² It turns out that not only do some debtors find it useful to have their repayment obligations extinguished in the event of a catastrophe,³³ some creditors are more than willing to accept the risk of non-payment in these contingencies because these risks are easy to diversify. Finally, contractual innovations can create value by reducing enforcement costs. Arbitration clauses arguably serve this purpose.³⁴

“public domain” and “all rights reserved.” See *About*, CREATIVE COMMONS, <http://creativecommons.org/about> (last visited Jan. 30, 2013) (describing Creative Commons and its vision). The licenses range in degrees of restriction according to four different dimensions: attribution, commercial use, derivative works, and “ShareAlike.” The first dimension, attribution, merely requires that the user give the author, artist, or creator credit. The second dimension, commercial use, allows the author to stipulate that his or her work can only be used in non-commercial enterprises. The third dimension, derivative works, refers to whether the license permits or prohibits the creation of derivative works based on the original work. So, for example, an “attribution non-commercial no-derivative” license essentially boils down to “free advertising.” For instance, a musician could release a song under this contract that would allow private individuals to share this work with friends as long as they kept the artist’s name attached to the work and did not adapt it in any way. The fourth dimension, “ShareAlike,” if applied, requires that any individual who does create a derivative work only distribute that work under an identical Creative Commons license. These licenses have been made available, free of cost, to the public. See *About the Licenses*, CREATIVE COMMONS, <http://creativecommons.org/licenses/> (last visited Jan. 30, 2013) (describing license types).

³⁰ For descriptions of users of Creative Commons licenses, including Al Jazeera, Google, and the White House, see *Who Uses CC?*, CREATIVE COMMONS, <http://creativecommons.org/who-uses-cc/> (last visited Jan. 30, 2013).

³¹ See J. DAVID CUMMINS & OLIVIER MAHUL, *CATASTROPHE RISK FINANCING IN DEVELOPING COUNTRIES: PRINCIPLES FOR PUBLIC INTERVENTION* 211–18, 222–35 (2009) (describing the structure of catastrophe bonds as well as the development of the market).

³² *Id.* at 211, 222, 225.

³³ These potential benefits are believed to be particularly significant for inhabitants of the developing world whose low incomes make them highly vulnerable to economic shocks, especially as climate change increases the incidence of extreme weather conditions. See *id.* at 13–25, 103–04 (discussing the benefits of catastrophic risk financing in developing countries).

³⁴ Christopher R. Drahozal, *Arbitration Costs and Forum Accessibility: Empirical Evidence*, 41 U. MICH. J.L. REFORM 813, 815–16, 826–32 (2008) (surveying data suggesting that the relative costs of arbitration and judicial proceedings depend on context). *But see* Theodore Eisenberg, Geoffrey P. Miller & Emily Sherwin, *Arbitration’s Summer Soldiers: An Empirical Study of Arbitration Clauses in Consumer and Nonconsumer Contracts*, 41 U. MICH. J.L. REFORM 871, 890–93 (2008) (setting forth data questioning the assumption that

Innovations which remove ambiguities or inconsistencies in the specification of obligations may affect both incentives and enforcement costs.³⁵ The more precisely the document specifies the actions to be undertaken in any given contingency, the less room there is for disagreement about how to proceed when that contingency arises.³⁶ For example, in the 2007 version of their standard-form General Contract terms, the American Institute of Architects (AIA) included provisions intended to address the unexpected discovery of human remains, burial sites, other archaeological materials, and wetlands.³⁷ Under the terms of the contract, if the Contractor “encounters” or “recognizes” any of these features, the Contractor is obligated to suspend “any operations that would affect them,” as well as to notify both the Owner and Architect.³⁸ The Owner is then obligated to take prompt action in order to gain the necessary governmental authorization for the resumption of work. In the meantime, the Contractor may continue to work on unaffected operations. If these events should affect the cost of completion or the time required, the Contractor may request adjustments in contract time and price in accordance with Article 15 of the agreement, which generally addresses claims and disputes.³⁹ The previous iteration of this form merely contained clauses addressing “concealed physical conditions” and the Owner’s obligations to obtain all necessary permits and approvals.⁴⁰ It arguably was unclear how those provisions applied in cases of concealed conditions

businesses prefer arbitration to litigation); Theodore Eisenberg, Geoffrey P. Miller & Emily Sherwin, *Mandatory Arbitration for Customers but Not for Peers: A Study of Arbitration Clauses in Consumer and Non-consumer Contracts*, 92 JUDICATURE 118, 119–22 (2008) (noting conflicting research in light of the same study of twenty-one large companies’ contracts and concluding that companies’ use of arbitration clauses only in consumer contracts but not in contracts with their peers suggests that lower cost is not the dominant motive for use of arbitration clauses).

³⁵ See Goetz & Scott, *supra* note 7, at 268–70 (“When unresolvable controversies arise over the meaning of ‘ambiguous’ contractual language, the parties must resort to an external dispute-resolution mechanism with its own criteria for interpretation. . . . ‘[I]ncompleteness error’ typically occurs when the parties inadvertently overlook a potentially important, but low probability contingency.”).

³⁶ Innovations in contract law (as opposed to contractual documents) can also reduce incompleteness risks. See, e.g., Goetz & Scott, *supra* note 7, at 270 (“[M]any of the general rules of contract, such as those of impossibility and excuse, impose constructive conditions that reduce incompleteness risks.”).

³⁷ AM. INST. OF ARCHITECTS, AIA DOCUMENT A201-2007: GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, § 3.7.5, available at <http://www.admin.state.mn.us/recs/cs/contracts/AIA%20201%20General%20Conditions%201997%20Edition.pdf>.

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ See AM. INST. OF ARCHITECTS, AIA DOCUMENT COMPARATIVE: A201-2007 COMPARED TO A201-1997, §§ 2.2.2, 3.7.4–5, 4.3.4, <http://www.aia.org/aiaucmp/groups/aia/documents/pdf/aia076821.pdf> (last visited Jan. 30, 2013).

that require the Owner to engage in distinctive interactions with government authorities. By addressing the matter explicitly, the revised form may reduce the probability of costly disputes over the parties' obligations when these contingencies arise.⁴¹

Innovations can also respond to changes in the contracting environment. The AIA's revisions concerning archeological discoveries and wetlands may fit this description, but the motivations behind those revisions are unclear.⁴² A more clear-cut example comes from the Canadian real estate market. In recent years, the risk that a home has been used as a "grow op"—a site for large-scale cultivation of marijuana—has emerged as a material concern for Canadian homebuyers.⁴³ The high temperatures and levels of humidity in grow ops can cause structural damage and lead to the formation of dangerous mold and fungus.⁴⁴ The combination of pesticide use and poor ventilation can lead to the build-up of dangerous chemical residues.⁴⁵

⁴¹ *But see* Lynn R. Axelroth & W. Alexander Moseley, *Owners' and Contractors' Commentaries on Problem Provisions*, 28 CONSTRUCTION LAW., no. 2, Spring 2008, at 26, 29 (arguing that the new provision, § 3.7.5, was unnecessary and introduces confusion). A more commonplace example of a clause that reduces the probability of costly disputes is a choice-of-forum clause. *See* *Carnival Cruise Lines, Inc. v. Shute*, 499 U.S. 585, 593–94 (1991) (“[A] clause establishing *ex ante* the forum for dispute resolution has the salutary effect of dispelling any confusion about where suits arising from the contract must be brought and defended, sparing litigants the time and expense of pretrial motions to determine the correct forum . . .”).

⁴² Axelroth & Moseley, *supra* note 41, at 29 (“It is difficult to understand why the drafting committee was compelled to add this new provision.”).

⁴³ *See* ONT. ASS'N OF CHIEFS OF POLICE, GREEN TIDE: INDOOR MARIHUANA CULTIVATION AND ITS IMPACT ON ONTARIO 2, 29 (2003), available at <http://www.ontla.on.ca/library/Repository/monoth/3000/10317711.pdf> (describing the growth and social problems associated with grow ops in Ontario); DARRYL PLECAS, YVON DANDURAND, VIVIENNE CHIN & TIM SEGGER, MARIHUANA GROWING OPERATIONS IN BRITISH COLUMBIA: AN EMPIRICAL SURVEY (1997–2000), at 32–34 (2002), available at <http://www.icclr.law.ubc.ca/publications/reports/grow.pdf> (describing an increasing number of grow ops discovered by police in British Columbia and noting that most operations were indoors, primarily in private houses); ROYAL CAN. MOUNTED POLICE, REPORT ON THE ILLICIT DRUG SITUATION IN CANADA—2009, at 16, 17 (2010), available at <http://www.rcmp-grc.gc.ca/drugs-drogués/2009/drug-drogué-2009-eng.pdf> (reporting that the amount of cannabis produced in Canada exceeds domestic demand and that indoor production sites are more common than outdoor sites).

⁴⁴ Luke I. Johnson & J. David Miller, *Consequences of Large-Scale Production of Marijuana in Residential Buildings*, 21 INDOOR & BUILT ENV'T 595, 598–99 (2012) (discussing the potential structural damage and health risks from moisture, mold, chemical residues, and illegal wiring); accord Allison Lampert, *A Growing Problem; Indoor Marijuana Farms Cause Untold Damage to Homes, but the Rules Are Unclear Whether Sellers Must Disclose That Their Homes Were Once Used as Grow-Ops*, THE GAZETTE, June 16, 2012, at C1; Megan O'Toole, *Former Pot Houses Growing Problem for Homebuyers; Reduces Price 20%; Criminal Element, Structural Damage Among Concerns*, NAT'L POST, Jan. 10, 2011, at A9.

⁴⁵ Johnson & Miller, *supra* note 44; Lampert, *supra* note 44.

In addition, the heavy electricity consumption can lead to wiring changes that present fire hazards.⁴⁶ In response to this change in the contracting environment, lawyers and realtors have innovated by developing clauses to be added to agreements of purchase and sale in which the seller represents that the house has not been used as a grow op.⁴⁷

Changes in legal aspects of the contracting environment can also make contractual innovation valuable. As Professor David Horton has shown, the recent history of arbitration clauses in consumer contracts in the United States is one of a cycle of innovation, with each round driven in large part by changes in the applicable law.⁴⁸ In the early 1980s, the Supreme Court of the United States began to demonstrate increasing willingness to enforce arbitration clauses in consumer contracts, even in the face of contradictory state law.⁴⁹ In response, many companies rewrote their consumer contracts to include arbitration clauses.⁵⁰ The next round in the cycle began with the Supreme Court's 2001 decision in *Green Tree Financial Corp. v. Bazzle*, which temporarily diminished the appeal of arbitration by holding that class arbitration was permitted if the arbitration agreement was silent on the matter.⁵¹ After the decision in *Bazzle*, many companies rewrote their arbitration clauses to ban class actions.⁵² However, between 2005 and

⁴⁶ Johnson & Miller, *supra* note 44, at 598; Lampert, *supra* note 44; O'Toole, *supra* note 44.

⁴⁷ *Government Relations Issue Update: Marijuana Grow Houses*, TORONTO REAL ESTATE BD. (Jan. 2011), http://www.torontorealestateboard.com/about_treb/lobbying/issues/pdf/grissues_grow-ops0111.pdf (describing realtors' efforts to have grow house clauses added to standard agreements of purchase and sale). In British Columbia, realtors added a question about whether the property had been used as a grow op to the province's standard pre-contractual disclosure statement. Press Release, B.C. Real Estate Ass'n, Grow-Ops Added to Property Disclosure (Feb. 20, 2004), available at <http://www.bcrea.bc.ca/docs/news-2004/2004-02-20-pds-release-final.pdf>.

⁴⁸ See David Horton, *The Shadow Terms: Contract Procedure and Unilateral Amendments*, 57 UCLA L. REV. 605, 619–45 (2010) (tracing the historical development of contractual procedural terms).

⁴⁹ See *Southland Corp. v. Keating*, 465 U.S. 1, 8 (1984) (holding that the U.S. Supreme Court had jurisdiction to decide whether the Federal Arbitration Act preempted state law voiding arbitration clauses); *Moses H. Cone Mem'l Hosp. v. Mercury Constr. Corp.*, 460 U.S. 1, 24 (1983) (noting that the Federal Arbitration Act sets forth a policy in favor of arbitration agreements, despite any state policies to the contrary).

⁵⁰ Horton, *supra* note 48, at 622–23 (“Banks, credit card issuers, and telecommunications companies watched this jurisprudence closely. . . . [W]hen the Court glossed over concerns that consumers did not knowingly assent to arbitration clauses, these groups saw an opportunity.”).

⁵¹ 539 U.S. 444, 451–53 (2003).

⁵² Horton, *supra* note 48, at 632 (“[A]fter *Bazzle*, [e]very big company rewrote their arbitration clauses to ban class actions.” (second alteration in original) (quoting Nora Lockwood Tooher, *Plaintiffs Wrestle with Class Action Arbitration Bans*, LAW. USA, Nov. 19, 2007, at 2, available at pubcit.typepad.com/clpblog/files/classarbarticle.pdf)).

2010, four state supreme courts and five federal circuit courts held that class arbitration waivers were substantively unconscionable in cases involving low-value claims.⁵³ Their stated concern was that without access to a class action it would be practically impossible for consumers with low-value claims to bring meritorious claims against vendors.⁵⁴ In response, some companies attempted to revise their arbitration clauses to maintain the ban on class arbitration while addressing courts' concerns about deterrence of low-value claims.⁵⁵

Professor Horton has shown how this pattern of innovation is reflected in the history of AT&T's arbitration clauses:

In 2001, AT&T unilaterally inserted an arbitration clause that prohibited class actions and included several other remedy-stripping provisions, including one that eliminated any right the plaintiff might have to recover attorney's fees. In 2005, after several more unilateral amendments to its procedural terms, AT&T unilaterally removed the remedy-stripping terms, but did not delete the class arbitration waiver. In December 2006 and again in January 2007, AT&T unilaterally overhauled its class arbitration waiver, disclaiming its own right to recover attorney's fees, allowing plaintiffs to attend the arbitration in person, by phone, or to waive a hearing, and providing a bounty of \$5000 and double attorney's fees for any plaintiff who recovers more than AT&T's last written settlement offer.⁵⁶

AT&T's revised arbitration clause was eventually upheld by the U.S. Supreme Court in *AT&T Mobility v. Concepcion*.⁵⁷

⁵³ See *id.* at 634 & n.202 (citing cases); see also *Fensterstock v. Educ. Fin. Partners*, 611 F.3d 124, 140 (2d Cir. 2010) (holding that a class action waiver and a class arbitration waiver were unconscionable), *vacated*, *Affiliated Computer Servs., Inc. v. Fensterstock*, 131 S. Ct. 2989 (2011); *Homa v. Am. Express Co.*, 558 F.3d 225, 230 (3d Cir. 2009) (striking down a class arbitration waiver); *Lowden v. T-Mobile USA, Inc.*, 512 F.3d 1213, 1218–19 (9th Cir. 2008) (same); *Dale v. Comcast Corp.*, 498 F.3d 1216, 1224 (11th Cir. 2007) (same); *Kristian v. Comcast Corp.*, 446 F.3d 25, 61 (1st Cir. 2006) (holding that a prohibition against class action in a contract between a cable television provider and customers was invalid); *Discover Bank v. Superior Court*, 113 P.3d 1100, 1109–10 (Cal. 2005) (striking down a class arbitration waiver); *Kinkel v. Cingular Wireless LLC*, 857 N.E.2d 250, 278 (Ill. 2006) (same); *Muhammad v. Cnty. Bank*, 912 A.2d 88, 99–100 (N.J. 2006) (same); *Scott v. Cingular Wireless*, 161 P.3d 1000, 1009 (Wash. 2007) (same).

⁵⁴ *Dale*, 498 F.3d at 1224 (“Without the benefit of a class action mechanism, the subscribers would effectively be precluded from suing Comcast”); Horton, *supra* note 48, at 634.

⁵⁵ See, e.g., *Firchow v. Citibank*, No. B187081, 2007 WL 64763, at *1–2 (Cal. Ct. App. Jan. 10, 2007) (describing Citibank's modification of a cardholder agreement that inserted a ban on class arbitration but gave its credit card customers twenty-five days to opt out by rejecting the waiver and continuing to use the card pursuant to pre-modification terms until the card expired).

⁵⁶ Horton, *supra* note 48, at 654–55.

⁵⁷ 131 S. Ct. 1740, 1748–52 (2011) (holding that a state law doctrine used to invalidate a class arbitration waiver was preempted by the Federal Arbitration Act).

Innovations are not, however, necessarily beneficial to society. This is as true for contracts as it is for other forms of technology.⁵⁸ Moreover, even when innovation is beneficial on balance, the benefits and costs may not be equally distributed. In fact, contractual innovations may not even be mutually beneficial to the parties who adopt them. This is because contracts serve both to create and redistribute value. In the presence of asymmetric information, better-informed parties have an incentive to propose innovative terms that redistribute value in their favor.⁵⁹ AT&T's ban on class arbitration is a case in point.

Contractual innovations can also generate negative externalities. The classic example is that of financial contracts which magnify contracting parties' risk of insolvency and thereby jeopardize their creditors' solvency.⁶⁰ In extreme cases, these kinds of innovations can throw entire economies into turmoil. These concerns prompted renowned investor Warren Buffet to call innovative derivatives contracts "financial weapons of mass destruction."⁶¹

Even if a particular contractual innovation is, on balance, beneficial to society, it may benefit some members of society more than others. For instance, some contractual innovations might increase the relative earnings of people with legal training. Others might be biased in favor, and thus increase the relative earnings of, people with training in the law of a particular jurisdiction, such as New York or England.⁶²

⁵⁸ For an apocalyptic analysis of the implications of advances in nuclear technology, biotechnology, and nanotechnology, see Bill Joy, *Why the Future Doesn't Need Us*, WIRED, Apr. 2000, at 238, available at <http://www.wired.com/wired/archive/8.04/joy.html>.

⁵⁹ See Oren Bar-Gill & Kevin Davis, *Empty Promises*, 84 S. CAL. L. REV. 1, 19 (2010) (noting incentives for firms to propose modifications that reduce consumers' welfare).

⁶⁰ For literature on the social costs and benefits of financial innovations, see Peter H. Huang, *A Normative Analysis of New Financially Engineered Derivatives*, 73 S. CAL. L. REV. 471, 491–503 (2000) (discussing the social costs and benefits of financial innovation); Eric A. Posner & E. Glen Weyl, *An FDA for Financial Innovation: Applying the Insurable Interest Doctrine to 21st-Century Financial Markets*, 107 NW. L. REV. (forthcoming Mar. 2013) (manuscript at 6–16), available at <http://ssrn.com/abstract=2010606> (same); see also Lerner & Tufano, *supra* note 8, at 82–84 (proposing a method of measuring the impact of financial innovations).

⁶¹ Letter from Warren E. Buffett, Chairman of the Board, Berkshire Hathaway Inc., to Shareholders of Berkshire Hathaway Inc. 15 (Feb. 21, 2003), available at <http://www.berkshirehathaway.com/letters/2002pdf.pdf>. Non-financial contracts can also generate negative externalities. See, e.g., Kevin E. Davis & Helen Hershkoff, *Contracting for Procedure*, 53 WM. & MARY L. REV. 507, 541–46 (2011) (arguing that procedural provisions such as class waivers can generate negative externalities).

⁶² Here parallels might be drawn to the phenomenon of skill-biased technological innovation. See generally Daron Acemoglu, INTRODUCTION TO MODERN ECONOMIC GROWTH 498–503 (2009). A technological innovation is said to be biased in favor of a particular factor of production—such as workers with a particular skill—when the company increases

C. *Uncertainty and Methods of Resolving It*

There are several ways in which the legal effects of a contract may be uncertain. Sometimes the parties to a contract, including parties who have supposedly negotiated or drafted a document, will be uncertain about the legal obligations it creates. This may be because they have not reviewed the applicable documents and laws with sufficient care or because they find it difficult to predict how those documents or laws will be interpreted (perhaps because they are ambiguous). The parties may also face uncertainty regarding salient features of the contracting environment, and, as a result, they may be uncertain about the consequences of assuming a particular set of legal obligations. Take for example a homebuyer trying to ascertain the effects of entering into an unconditional agreement of purchase and sale in a region where there is a material risk that houses have been used as grow ops.⁶³ The buyer may be uncertain of the effects of the agreement because he or she does not know whether the express or implied warranties cover this risk. Alternatively, he or she may be uncertain—or even completely unaware—of the prevalence of grow ops and the amount of damage they can cause.

These kinds of uncertainty can limit the value of a contract in three main ways. First, for some parties uncertainty is inherently undesirable. Second, uncertainty can dilute desirable incentives, or even create perverse incentives, for one or both parties. Third, uncertainty can lead to disagreements between the parties that lead to costly litigation. Take for example a contract with a liquidated damages clause at risk of being deemed an unenforceable penalty. Assume that if the clause is unenforceable, then only minimal damages will be awarded. Some parties will reflexively wish to avoid this uncertain state of affairs. As the likelihood that the clause will be found to be unenforceable increases, the less effective it will be in motivating performance. In addition, the more that the parties disagree about the

the relative (marginal) productivity of that factor of production which then increases its relative earnings. *Id.* at 501. If the bias in favor of a particular factor is sufficiently strong, an innovation may increase the relative earnings of a factor even as the supply of that factor increases. *Id.* at 500. For example, since the late 1970s, technological change in the United States appears to have been strongly biased in favor of skilled labor. Over that period, the earnings of skilled workers relative to unskilled workers increased even as the relative supply of skilled workers also increased. *Id.* at 498, 512. Acemoglu is careful to distinguish the concepts of factor-biased and factor-augmenting technological change. He suggests that factor-biased technological change increases the relative demand for the factor in question. Meanwhile, factor-augmenting technological change makes that factor more productive in physical terms but may not increase the relative demand for it. *Id.* at 500–03.

⁶³ See *supra* notes 43–47 and accompanying text.

likelihood of enforcement, the more likely they are to incur litigation costs.

The value of a contract to the parties who adopt it may also depend on the extent to which third parties are uncertain about its effects. This is most likely to be the case if the parties to a contract value the ability to transfer interests in it to the third parties in question, either directly or indirectly.⁶⁴ For example, parties to intellectual property licenses might value the ability to assign them to joint venture partners, bondholders might value the ability to sell their holdings on the secondary market, and banks might value the ability to sell participations in their loans to other banks. Similarly, firms effectively sell indirect interests in their material contracts to investors when they issue securities since the value of the contracts contributes to the value of the securities. Consider, for example, a power company whose principal asset is a contract to sell power to a utility company. If the power company issues securities, the value of those securities will depend heavily on the value of the contract. The easier it is for investors to value the contract, the greater the proceeds the company will earn from issuing securities.

To some extent uncertainty about the effects of a contract is resolved automatically with the passage of time and during the course of performance. This occurs as users of the contract become entangled in disputes. The very existence of the dispute reveals information about the likelihood and magnitude of previously unanticipated risks. Moreover, in the course of resolving their disputes, the parties typically attempt to determine the effect of the contract. In addition, all of this information is often revealed to interested observers. Disputes that result in litigation and binding judicial interpretations of contractual documents are particularly informative.⁶⁵ For example, a litigated dispute over whether a buyer is obligated to perform an agreement to purchase a property that had been used as a grow op will resolve uncertainty not only for the buyer and seller involved in the dispute, but will be useful to many other potential home buyers as well.⁶⁶

There are three proactive ways in which people can resolve uncertainty about the effects of a particular contractual document: (1)

⁶⁴ Greely, *supra* note 8, at 135–42 (discussing how the prospect of secondary sales encourages standardization).

⁶⁵ See Goetz & Scott, *supra* note 7, at 276–79 (describing how the process of judicial implication of terms reduces “formulation errors”); see also Klausner, *supra* note 8, at 775–79 (characterizing judicial interpretations as “network benefits”).

⁶⁶ See, e.g., Lampert, *supra* note 44 (describing litigation in Laval, Quebec over whether the seller had a duty to disclose information about prior use as a grow op pursuant to general provisions of the Quebec Civil Code).

by reading the document more carefully, (2) by investigating the drafter of the document, and (3) through the lawmaking process.

The first method involves incurring what we might call “reading costs.”⁶⁷ For instance, in some Canadian real estate markets a close reading of recently drafted agreements of purchase and sale will reveal a representation that the property has not been used as a grow op.⁶⁸ Such a clause alerts naive buyers to the existence of this risk and resolves uncertainty about how it will be dealt with by the courts.

The magnitude of reading costs—how “readable” the contract is—will depend in part on the inherent complexity of the contract, the number of distinct contingencies provided for, and the amount of detail with which the parties’ obligations are specified in each contingency.⁶⁹ Reading costs also depend on the clarity of the language in the contractual document and in the applicable body of contract law. Some documents are simply more readable than others. Here it is important to take into account not just the contractual document itself but also any available commentary, such as user’s guides or annotations. Last but not least, the magnitude of reading costs also depends on how much the document and the associated contract deviate—in terms of both language and substance—from documents with which the reader is already familiar.⁷⁰

This last point suggests that the reading costs associated with a contractual document will decline as potential readers become familiar with the document. Up to a point, it is easier to review an agreement that contains only modest deviations from a familiar document than it is to read a document of similar length from scratch—hence the popularity of blacklining to compare different versions of contracts. This in turn implies that the value of adopting a given contractual document will increase to the extent that it either is already familiar to potential readers or is expected to become familiar to such

⁶⁷ The concept of reading costs and their significance are discussed in Eric Bennett Rasmusen, *Explaining Incomplete Contracts as the Result of Contract-Reading Costs*, 1 *ADVANCES ECON. ANALYSIS & POL’Y*, at art. 2 (2001). See also Abraham L. Wickelgren, *Standardization as a Solution to the Reading Costs of Form Contracts*, 167 *J. INST. & THEORETICAL ECON.* 30 (2011) (explaining how standard form documents reduced reading costs).

⁶⁸ See *supra* note 47 and accompanying text.

⁶⁹ This might alternatively be described as the level of “completeness” of the contract. See Davis, *supra* note 18, at 5–6 (discussing completeness as either limiting the range of actions permitted in a given contingency or limiting the number of contingencies in which a given action is permitted).

⁷⁰ See, e.g., Goetz & Scott, *supra* note 7, at 286–87 (noting that the use of “preformulated terms” may ease communication); Wickelgren, *supra* note 67, at 39 (“[S]tandardization facilitates the comparison of contracts from different firms without having to read both contracts.”).

readers while it is in use. In other words, the value of a document will depend on how frequently it has been used in the past and how widely it will be used while in force.⁷¹ Kahan and Klausner call these two effects “learning benefits” and “network benefits” respectively.⁷² The corollary of this insight is that relatively innovative contracts—that is to say, contracts which are relatively unfamiliar—will not be particularly valuable unless they are expected to be widely adopted.⁷³ This argument has been cited as the reason sovereign bond markets appear to be slow to embrace theoretically appealing innovations such as collective action clauses.⁷⁴

A second way to resolve uncertainty about a contract is to investigate the person who drafted the contractual document. In other words, it may be possible to draw inferences about the contract from the trustworthiness of the drafter.⁷⁵ In this context, “trustworthiness” refers to the extent to which the drafter can be expected to act in the interests of the prospective user. Trustworthiness might stem from the personal values and predilections of the individuals involved or the values embedded in an organizational culture.⁷⁶ For instance, when it comes to adopting a contract used by other parties, it may be sensible to trust people or organizations known to be obsessively farsighted and thorough; copying a corporate acquisition agreement drafted by an established Wall Street law firm makes more sense than copying from a novice solo practitioner. Trustworthiness might also be a

⁷¹ See Goetz & Scott, *supra* note 7, at 286–88 (discussing the benefits that flow from wide use of standardized terms, in particular, from the widespread understanding of precise terminology); Kahan & Klausner, *supra* note 8, at 719–27 (discussing multiple possible benefits of employing widely used terms, including increased efficiency and familiarity, reduced uncertainty, and lower costs); Klausner, *supra* note 8, at 782–88 (describing how the wide use of contracting terms—including both contemporaneous use and past use—can drive down the costs associated with those terms by, for example, reducing legal costs and costs associated with uncertainty).

⁷² Kahan & Klausner, *supra* note 8, at 719, 725.

⁷³ See *id.* at 734–35 (noting that “[e]arly adopters of a term” can expect to realize benefits from the term commensurate with the number of other businesses that begin to make use of the term and the speed with which they do so); Klausner, *supra* note 8, at 774–75 (comparing contract terms to technology—in particular, to a computer network—and noting that the value of the development and explication of the terms will likely depend, at least in part, on the size of the network).

⁷⁴ See Choi & Gulati, *supra* note 8, at 939–49 (discussing bond market innovation trends); cf. Stephen J. Choi, G. Mitu Gulati & Eric A. Posner, *The Dynamics of Contract Evolution*, 88 N.Y.U. L. REV. 1 (2013) (citing evidence that innovation in sovereign bond agreements is more common than models based on network effects would predict).

⁷⁵ See Rasmusen, *supra* note 67, at 9–10 (discussing how an honest reputation might reduce reading costs).

⁷⁶ See Oliver E. Williamson, *Calculativeness, Trust, and Economic Organization*, 36 J.L. & ECON. 453, 475–79 (1993) (discussing how cultural factors may induce trust).

reflection of the incentives facing the drafter.⁷⁷ Take the case of whether to adopt a standard form proposed by a counterparty. A firm that is likely to lose a significant amount of business if it gains a reputation for drafting one-sided contracts has an incentive to be trustworthy. This may explain evidence that firms that withhold contractual terms from consumers do not systematically adopt biased terms.⁷⁸

A third proactive way of resolving uncertainty—and shaping the manner in which that uncertainty is resolved—is through the law-making process.⁷⁹ Drafters could initiate litigation or lobby for legislation designed principally to clarify the legal effect of their documents. For example, the International Swaps and Derivatives Association (ISDA) has launched a worldwide campaign to lobby for the enactment of legislation that ensures that the “netting” provisions of their agreements will be enforced in the event of insolvency.⁸⁰ Similarly, Canadian realtors have lobbied for governments to establish registries listing homes that have been used as grow ops.⁸¹

Rational parties should only incur reading costs and investigation costs to the point at which the benefit of resolving any remaining uncertainty equals the incremental reading, investigation, litigation, or lobbying costs.⁸² In some situations, it will be optimal to choose one strategy over the other. For instance, in highly adversarial situations, the optimal strategy might be to read carefully. If the drafter is considered to be highly trustworthy, on the other hand, it might be rational to forgo reading altogether. Of course, in some situations a

⁷⁷ See *id.* at 463–75 (discussing situations in which trust is based on rational calculation).

⁷⁸ See Florencia Marotta-Wurgler, *Are “Pay Now, Terms Later” Contracts Worse for Buyers? Evidence from Software License Agreements*, 38 J. LEGAL STUD. 309, 312 (2009) (finding that less accessible end-user license agreements are not systematically biased for or against consumers).

⁷⁹ See, e.g., Goetz & Scott, *supra* note 7, at 274 (discussing the UCC as a response to mounting “[p]ressure . . . to imply informal understandings and usages into contracts”).

⁸⁰ For a discussion of ISDA’s lobbying campaign, see Memorandum from the Int’l Swaps and Derivatives Assoc., Inc. on the Implementation of Netting Legislation (Mar. 2006), available at <http://www2.isda.org/attachment/MjM4NQ==/Memo-Model-Netting-Act.pdf>. For a list of the jurisdictions which had adopted ISDA’s Model Netting Act as of July 2011, see *Netting Legislation—Status*, INT’L SWAPS AND DERIVATIVES ASSOC., INC. (Jul. 26, 2011), <http://www2.isda.org/attachment/MzQwMQ==/NETTING%20LEGISLATION%20072611.pdf>.

⁸¹ See *Government Relations Issue Update: Marijuana Grow Houses*, *supra* note 47 (noting the realtors’ lobbying of municipal, provincial, and federal governments for changes including the creation of a registry of grow houses).

⁸² See Avery Katz, *Your Terms or Mine? The Duty to Read the Fine Print in Contracts*, 21 RAND J. ECON. 518, 522–30 (1990) (providing a formal model of this choice that also takes into account the possibility that the drafter of the contract will anticipate the choice made by the potential reader).

combination of reading, investigation, litigation, and lobbying might be optimal.

Innovations can also influence the magnitude of reading costs. By definition, an innovative document represents a departure from an existing document. If the existing document is familiar to readers, then the innovation will tend to increase reading costs. The less comparable the innovative contract is to familiar alternatives, the greater the incremental reading costs.⁸³ Increasing the number of potential readers has the same effect. If the innovative contract will cause many people in an organization to incur additional reading costs, then it will be relatively unattractive.⁸⁴ The same consideration limits the value of innovation in settings where the ability to transfer a contract is very valuable. This implies, for example, that we should see relatively little innovation in the contracts embodied in securities that are intended to be widely traded.⁸⁵ Similar reasoning suggests that innovation is relatively unlikely to be valuable in contracts that are likely to be material to investors in the organizations bound by the contract.

Some innovations are designed to enhance readability or comparability. This is the main purpose of redrafting contracts in plain language.⁸⁶ Innovations in materials that supplement contractual documents, such as annotations or training manuals, can also serve to reduce reading costs. Meanwhile, labeling documents in accordance with a standardized scheme can facilitate both comparison and access to supplementary materials. This is especially true if the labels are machine readable. For example, embedding XML codes in contractual

⁸³ Davis, *supra* note 12, at 1084 n.37 (“[S]tandardization makes it easy for consumers to shop around.”); *see also* Wickelgren, *supra* note 67, at 39 (“[S]tandardization facilitates the comparison of contracts from different firms without having to read both contracts.”).

⁸⁴ *See* Todd D. Rakoff, *Contracts of Adhesion: An Essay in Reconstruction*, 96 HARV. L. REV. 1173, 1222–23 (1983) (explaining the use of standard forms as a way of reducing the costs of communication within complex organizations); *see also* RESTATEMENT (SECOND) OF CONTRACTS § 211 cmt. a (“[Standardized] [f]orms can be tailored to office routines, the training of personnel, and the requirements of mechanical equipment. Sales personnel and customers are freed from attention to numberless variations and can focus on meaningful choice among a limited number of significant features Operations are simplified and costs reduced.”).

⁸⁵ *See* Greely, *supra* note 8, at 167 (noting that, where standardization is common, “some innovations that would have been adopted in the absence of standardization will not be adopted” because the firm would “lose[] the premium in the secondary market for standardization”).

⁸⁶ *See* Bernard Black, Note, *A Model Plain Language Law*, 33 STAN. L. REV. 255, 261–62 (1981) (arguing that drafting contracts in plain language ensures that consumers “can read and understand” them and empowers consumers to “shop more wisely”). For a discussion of readability formulas, *see id.* at 278–80, where the author highlights New York’s “vague standard for plain language” and the Flesch-Kincaid readability test, among others). *But see* Goetz & Scott, *supra* note 7, at 300 (“For [practitioners], plain and simple language has long conjured up the specter of negligence liability.”).

documents can make it easy for individual terms to be searched for and linked to texts that explain their import, even as they are cut and pasted from one document to another.⁸⁷

II

THE SUPPLY OF INNOVATION

Supplying innovations involves both generating innovations and disseminating them to prospective users. The analysis in this Part is premised on the idea that the two types of processes are interrelated to the extent that contractual innovation is cumulative—in other words, to the extent to which it involves changing only selected terms of an existing document (as opposed to drafting from scratch). When innovation is cumulative, the results of investments in innovation will generally depend on the nature and quality of the documents the innovator had to work with.

A. *Generating Innovations*

1. *For-Profit Innovation*

Prominent commentators have suggested that contractual innovation is undersupplied, meaning that the social benefits of additional innovation would exceed the costs.⁸⁸ This view appears to be based on analysis of one particular form of innovation: innovation that flows from deliberate investments in research and development aimed at capturing the pecuniary benefits of either using or selling the resulting contractual documents.

What kinds of investments are required to create an innovative contract? Facts revealed in the course of a copyright dispute between two insurance companies provide hints about the kinds and amount of effort required to produce valuable contractual innovations. In *American Family Life Insurance Co. of Columbus v. Assurant, Inc.*,⁸⁹ the plaintiff American Family Life Insurance Co. (AFLAC) complained that the defendants had infringed its copyrights in four insurance policies.⁹⁰ AFLAC's witnesses testified that each policy took between eight and nine months to create, with drafting requiring

⁸⁷ See Lawrence A. Cunningham, *Language, Deals and Standards: The Future of XML Contracts*, 84 WASH. U. L. REV. 313, 314–23 (2006) (discussing the application of XML to commercial contracts).

⁸⁸ See Goetz & Scott, *supra* note 7, at 290–94 (discussing different barriers to contractual innovation); Gulati & Scott, *supra* note 8, at 12 (describing the innovation-chilling effects of law firms' organization).

⁸⁹ No. 1:05-CV-1462, 2006 WL 4017651 (N.D. Ga. Jan. 11, 2006).

⁹⁰ *Id.* at *3.

between three to six months.⁹¹ Numerous individuals were involved in the process.⁹² Before they could start drafting, “AFLAC had to decide which new conditions and treatments to cover; which new benefits to provide and on what terms; which existing benefits, if any, to change; which definitions and/or other provisions to add or change; and which order was best.”⁹³ Drafts of the policies were “reviewed and revised ‘repeat[edly]’” to determine “whether the proposed language appropriately described the specific benefits to be provided . . . ; whether the overall language was consistent with the actuarial department’s understanding of the anticipated coverage; what effect the new policy language would have on claims; [and] whether claims administrators had clear guidelines for making benefit determinations”⁹⁴ AFLAC also evaluated whether “its ‘narrative’ language style—as compared to the ‘terse, nondescriptive’ style employed by some of its competitors—would be ‘readily understood by consumers.’”⁹⁵ Meanwhile the defendants—who were found to have infringed copyright by copying two of the plaintiff’s policies virtually word for word—claimed to have paid an outside law firm over \$540,000 to draft their policies.⁹⁶

Inability to appropriate the benefits of innovation, in contracting as well as other fields, is often seen as one of the leading obstacles to profit-oriented innovation.⁹⁷ The benefits that flow to a person who invests in research and development will depend upon both the total benefits generated by any resulting innovation and the extent to which the person is able to appropriate those benefits. Documents are easy to copy and their original producers typically do not share in the benefits derived by copiers. Consequently, producers of innovative documents can typically capture only a fraction of the social benefits created by their innovations. This in turn implies that producers will have sub-optimal incentives to invest in innovation—it will not be in their interest to invest in innovation to the point where the costs of their investment would equal the full social benefits of innovation.⁹⁸

⁹¹ *Id.* at *1.

⁹² *See id.* at *2 (noting that the drafting process included “representatives from the company’s actuarial, claims, marketing, compliance, and underwriting departments”).

⁹³ *Id.*

⁹⁴ *Id.* (first alteration in original).

⁹⁵ *Id.* (citations omitted).

⁹⁶ *Id.* at *2 n.12.

⁹⁷ For a summary of the general incentive problem, see SCOTCHMER, *supra* note 14, at 31–41. In relation to contracts, see Goetz & Scott, *supra* note 7, at 292 (“So long as individual contractors are incapable of capturing the full benefits of their innovative expressions, new formulations will be underproduced.”).

⁹⁸ *See* Goetz & Scott, *supra* note 7, at 264 (explaining that barriers to innovation impose costs on the development of new contractual formulations).

The situation would be different if intellectual property laws provided greater protection for producers of contractual documents. Contracts are protected by copyright as “original works of authorship,” but only the most blatant and literal forms of copying violate that copyright.⁹⁹ Copyright in a document is not infringed by using similar language embodying the same idea, much less by different language.¹⁰⁰ It has also been held that the specific language of a contract or a business form cannot be copyrighted where the use of that language is essential to expressing a particular underlying idea.¹⁰¹ Similarly, although it is not clear whether anyone has ever sought to patent a contractual document, the requirement that patentable inventions must utilize or harness a “law of nature” is likely to make it difficult to obtain such a patent.¹⁰² On the other hand, so long as they are not disseminated too widely, innovative contractual documents might be protected as trade secrets.¹⁰³

⁹⁹ See generally *id.* at 292 n.78 (considering contractual innovations in light of the federal copyright law); Paul G. Reiter, Annotation, *Copyright, Under Federal Copyright Laws, of Forms, or Form Books*, 8 A.L.R. FED. 869 (1971) (describing the circumstances under which forms and form books receive copyright protection under federal law).

¹⁰⁰ *AFLAC*, 2006 WL 4017651, at *8 (“Necessarily, where the same contractual provision is to be expressed there will be similarity of language. To constitute infringement in such cases a showing of appropriation in the exact form or substantially so of the copyrighted material should be required.” (quoting *Dorsey v. Old Sur. Life Ins. Co.*, 98 F.2d 872, 874 (10th Cir. 1938)).

¹⁰¹ See, e.g., *Herbert Rosenthal Jewelry Corp. v. Kalpakian*, 446 F.2d 738, 742 (9th Cir. 1971) (“When the ‘idea’ and its ‘expression’ are thus inseparable, copying the ‘expression’ will not be barred, since protecting the ‘expression’ in such circumstances would confer a monopoly of the ‘idea’ upon the copyright owner free of the conditions and limitations imposed by the patent law.”).

¹⁰² Under the Patent Act, only inventions or discoveries may be patented. 35 U.S.C. § 101 (2006). The Supreme Court has construed the term “inventions” to include things “made by man” that utilize or harness a “law of nature” (e.g., gravity) for human benefit. See, e.g., *Diamond v. Diehr*, 450 U.S. 175, 182–88 & n.11 (1981) (explaining that a mathematical formula was not patentable because abstract ideas did not enjoy patent protection but that a process for curing synthetic rubber, which incorporated a mathematical formula, was patentable); see also Andrew A. Schwartz, *The Patent Office Meets the Poison Pill: Why Legal Methods Cannot Be Patented*, 20 HARV. J.L. & TECH. 333, 335 (2007) (criticizing the Patent Office’s decision to patent legal methods). On the other hand, business methods are “inventions” that are patentable. See *Bilski v. Kappos*, 130 S. Ct. 3218, 3228 (2010) (explaining that the Patent Act also covers some business methods). Schwartz claims that this is because they either save time or harness a law of nature (e.g., mathematics) for human benefit. Schwartz, *supra*, at 371–72 (citing *State St. Bank & Trust Co. v. Signature Fin. Grp., Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), *cert. denied*, 525 U.S. 1093 (1999)).

¹⁰³ The single most important requirement of the trade secret law is that the trade secret must in fact be secret. RESTATEMENT (FIRST) OF TORTS § 757 cmt. b (1939). Although disclosure to employees, licensees, or others on a need-to-know basis is permissible, *In re Innovative Const. Sys., Inc.*, 793 F.2d 875, 883 (7th Cir. 1986), the secrecy requirement generally discourages wide dissemination of innovations. Moreover, information disclosed about a publicly available product cannot be a trade secret. See, e.g., *Nora Beverages, Inc. v. Perrier Grp. of Am.*, 164 F.3d 736, 750 (2d Cir. 1998) (finding that the shape of water

Third parties who generate innovations for use by others face another obstacle to appropriating the value of their innovations: Prospective users may find the value of the innovation uncertain. The benefits of a good contract are often invisible: Accidents are avoided because parties responded to incentives to take precautions and disputes are forestalled because obligations are clear. Users will not pay for what they cannot see, and unsophisticated users may not be able to see the benefits of adopting an innovative contract. At the same time, the ill effects of a poorly drafted contract are often highly visible: unpleasant surprises, confusion, and litigation. A drafter who provides a poor quality document may or may not be legally liable for these costs, but its reputation may suffer. Consequently, third parties who provide contracts for use by others may bear the downside risk of innovation but little of the upside.¹⁰⁴

2. *Innovation Aimed at Capturing Indirect or Non-pecuniary Benefits*

There is no question that inability to capture pecuniary benefits presents a significant obstacle to profit-oriented innovation. However, the significance of this obstacle is unclear because the prospect of receiving indirect or non-pecuniary benefits can bolster incentives to invest in innovation. There are situations in which it is valuable for a firm to develop a reputation for creating innovative contracts, typically as a way of attracting prospective clients. For instance, a law firm or investment bank may be happy to let other people in on its latest great idea in order to attract clients who want to benefit from the next idea.¹⁰⁵ In addition, actors who are not motivated by the prospect of profit produce many technological innovations. These actors include, for example, weekend hobbyists and scientists employed by not-for-profit academic institutions.¹⁰⁶ In this situation, the pace of innovation

bottles in the market cannot be a trade secret). These authorities suggest that innovative contractual language plainly written on the face of a contract will likely constitute such disclosure “in the normal process of exploitation” if the contract is disseminated widely. *Aronson v. Quick Point Pencil Co.*, 440 U.S. 257, 266 (1979).

¹⁰⁴ See Claire A. Hill, *Why Contracts Are Written in “Legalese,”* 77 CHI.-KENT L. REV. 59, 71–72 (2001) (noting that “for the lawyers’ firms, following the standard makes avoiding a bad outcome . . . easier and less costly”).

¹⁰⁵ This is how some scholars explain Wachtell, Lipton, Rosen & Katz’s investment in creating the poison pill. See Powell, *supra* note 8, at 434–38; see also Peter Tufano, *Financial Innovation and First-Mover Advantages*, 25 J. FIN. ECON. 213, 215–35 (1989) (providing evidence that producers of financial innovations have advantages over competitors that might arise because innovation is a signal of intangible and unique abilities).

¹⁰⁶ For a survey of the literature, see Jeanne C. Fromer, *Expressive Incentives in Intellectual Property*, 98 VA. L. REV. 1764–81 (2012) (discussing non-pecuniary motivations of authors and inventors).

depends on the supply of appropriately motivated actors as well as their access to funding (for example, from the state or charitable institutions) and prior innovations. Similarly, academics or well-intentioned bureaucrats who review and suggest improvements to existing contractual documents may drive contractual innovation.

3. *Learning-by-Doing*

Technological innovations are not necessarily the products of deliberate and costly research or development. Instead, some innovations are by-products of the use of previous generations of technologies. In other words, innovation might result from learning-by-doing, or more appropriately, learning-by-trading.¹⁰⁷ In this case, the nature of innovation in a given field, starting from a given technological base, will be an increasing function of activity levels.¹⁰⁸ It seems intuitive that this kind of process will play a role in contractual innovation. For example, the revisions to the AIA document to address archeological materials on construction sites may have been an organic product of experience rather than the result of a deliberate search for ways to improve the contract. Similarly, a cell-phone company that finds itself a defendant in a class arbitration may add a class action waiver to its standard form arbitration agreement without needing to commission an empirical study on the prevalence of class actions.

B. *The Importance of Cumulative Innovation*

Technological innovation is generally cumulative; for the most part it involves applying existing knowledge in new contexts or combining existing technologies in new ways.¹⁰⁹ There is no reason to believe that contractual innovation is any different. Most innovations are likely to result from incremental changes such as small tweaks to existing documents, often using language lifted from other documents, rather than from drafting entirely new contractual language from scratch.¹¹⁰ For example, notwithstanding the substantial investment

¹⁰⁷ See Kenneth J. Arrow, *The Economic Implications of Learning by Doing*, 29 REV. ECON. STUD. 155 (1962) (developing a model in which technical change occurs through experience).

¹⁰⁸ *Id.* at 157 (using cumulative production of capital goods as an index of experience).

¹⁰⁹ See Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989, 997 (1997) (“[K]nowledge is cumulative—authors and inventors must necessarily build on what came before them.”).

¹¹⁰ See Hill, *supra* note 104, at 70–75 (describing incentives to draft contracts by changing existing documents).

AFLAC made in revising its insurance policies, the final products still involved additions to and revisions of earlier versions.¹¹¹

If contractual innovation is generally cumulative, then access to contractual documents will be a crucial determinant of the quality of innovation.¹¹² The more widely an innovative contract is disseminated—meaning the easier it is to find and review—the easier it will be for other actors to use it as a basis for innovation and the better the results of their investments in innovation will be. For instance, AFLAC’s drafting process would undoubtedly have been much less productive if it had been forced to draft a new policy from scratch or if the policy it used as a starting point had been of poorer quality.

An important implication of the phenomenon of cumulative innovation is that the benefits of creating and disseminating an innovative contract go beyond the benefits to its users. The benefits of innovation and dissemination also include benefits reaped by people who use innovations enabled by the initial innovation.¹¹³

C. Dissemination

Dissemination involves the transmission of innovations from innovators to potential users. Transmission involves both sending and receiving information, and so it encompasses not only publishing information but also searching for and assimilating that information. Sometimes this process is virtually automatic, as when a person who has drafted an innovative contract presents it to a counterparty who then turns around and reuses it in dealings with other parties. Otherwise, dissemination involves costly efforts both to publish and search for documents.

The costs of dissemination have several components. The costs of publication are now almost trivial, consisting mainly of the costs of uploading, storing, and downloading documents. If, however, contractual documents contain information about users’ business methods,

¹¹¹ Am. Family Life Ins. Co. of Columbus v. Assurant, Inc., No. 1:05-CV-1462-BBM, 2006 WL 4017651, at *6 (N.D. Ga. Jan. 11, 2006) (describing revisions).

¹¹² On the general importance of access to technology as a determinant of innovation, see МОКУР, *supra* note 4, at 7 (“Progress in exploiting the existing stock of knowledge will depend first and foremost on the efficiency and cost of *access* to knowledge.”).

¹¹³ See Lemley, *supra* note 109, at 997–98 (discussing the potential for and constraints on improvements of old works). In copyright law it is well recognized that permitting the creation of new works derived from existing texts is a way of advancing the progress of science and art and is used to justify limits on copyright protection. For instance, in *Feist Publications, Inc. v. Rural Telephone Service Co.*, 499 U.S. 340, 349–50 (1991), Justice O’Connor noted that “[i]t may seem unfair that much of the fruit of the compiler’s labor may be used by others without compensation” but concluded, “[t]his result is neither unfair nor unfortunate. It is the means by which copyright advances the progress of science and art.”

then dissemination risks revealing confidential information. In this case, the costs of publication include the costs of redacting documents and any residual costs associated with disclosure of confidential information.

The other components of dissemination costs are the costs of searching for and assimilating contractual documents. To some extent, the magnitude of these costs will depend on the manner in which the document was published. Publishers can make contractual documents readable, comparable, and searchable by developing explanatory materials and tools for searching for documents that meet the needs of specific users. The costs of developing these kinds of materials and tools, as well as the costs of making them familiar to potential users, should not vary with the size of the database being searched. Similarly, the costs of identifying the database in which a particular document is stored decline as databases become more comprehensive. For both of these reasons, there may be economies of scale and scope in the publication of contractual documents. In other words, firms that are already in the business of publishing large numbers of documents, both contractual and otherwise, should tend to have lower average costs than other firms.

For users, the potential costs of dissemination also include loss of competitive advantage, assuming that the contract finds its way into a competitor's hands. It is valuable to have exclusive access to a contract that has greater intrinsic value or is more readable than the contracts of competitors. Losing that advantage should be counted as a cost of dissemination. So, for example, an insurance company like AFLAC might suffer a real economic cost if competing insurance companies begin to use its policies.

So what motivates actors to incur dissemination costs? It is reasonably clear why prospective users will search for innovative contracts—they hope that the value of the innovations they discover will exceed the costs of searching. But why do drafters of innovative contracts incur the costs of publishing them? Drafters who are users benefit from disseminating innovative documents to potential counterparties, transferees, and their agents. In cases where the contractual document is regarded as an integral part of the user's product offerings, as is the case for firms such as insurance companies and credit card issuers, dissemination is likely to be part and parcel of a broader marketing campaign. Reducing reading costs for these actors makes it more likely that they will trade with the drafter. As for drafters who produce documents for use by others, dissemination can provide direct pecuniary benefits in the form of fees received for selling access to the documents. There may also be indirect benefits in

the form of revenues from selling complementary products, such as explanatory materials, training programs, dispute resolution services, or legal advice.

Drafters may also benefit from disseminating contracts because they anticipate reciprocity. Scholars of innovation have identified many contexts in which communities of user-innovators share their innovations with one another.¹¹⁴ They may do this because they expect to benefit from similar behavior on the part of other drafters in the not-too-distant future. This interpretation is particularly plausible when the costs of dissemination, including both the direct costs and other costs stemming from loss of exclusive access to an innovation, are low.¹¹⁵ So, for example, the owner of a garment factory in Bangladesh might share copies of his novel letter-of-credit documentation with the owner of a soccer ball manufacturer, as opposed to a competing garment manufacturer, on a “you scratch my back, and I’ll scratch yours” basis.

In principle, users might also share contracts without expecting to receive direct economic benefits in return. Some scholars have speculated that these kinds of sharing norms arise among user-innovators when there are significant but indirect net economic benefits for the group as a whole.¹¹⁶ This is likely when sharing generates indirect benefits for the innovator, the direct costs of sharing are low, and the costs of enforcing norms that require sharing are also low.¹¹⁷ Wiki technology¹¹⁸ can now be used to facilitate sharing of innovative contractual provisions and may help to sustain sharing norms by making it

¹¹⁴ See VON HIPPEL, *supra* note 14, at 77–91 (arguing that users often disseminate their innovations voluntarily, and that this is the best way to benefit from what they have developed); see also Katherine J. Strandburg, *User Innovator Community Norms: At the Boundary Between Academic and Industry Research*, 77 *FORDHAM L. REV.* 2237, 2240–41 (2009) (citing examples of user-innovator communities).

¹¹⁵ See Strandburg, *supra* note 114, at 2244 (including the costs and rewards of sharing innovations in a decisionmaking model).

¹¹⁶ *Id.* at 2241–42.

¹¹⁷ See VON HIPPEL, *supra* note 14, at 90–91; see also Strandburg, *supra* note 114, at 2245 (“Such a norm [of sharing] is viable as long as the group can detect failure to share and impose a sufficient penalty (or equivalently increase the reward for sharing) at a relatively low cost.”); *id.* at 2246 (“[N]orms of sharing are more tenable when the costs of sharing an innovation are relatively low.”).

¹¹⁸ “The term wiki reflects both a software platform and a website format. The salient features for the typical wiki website are pages that can be easily edited using a web browser, updated—often in real time—and collectively edited by its readers/participants.” Jon M. Garon, *Wiki Authorship, Social Media, and the Curatorial Audience*, 1 *HARV. J. SPORTS & ENT. L.* 95, 97–98 (2010) (citation omitted).

possible for those who share to be rewarded through public recognition of their contributions.¹¹⁹

III THE SOURCES OF INNOVATION

What kinds of organizations are likely to produce contractual innovations and to disseminate them in the ways discussed in the preceding Parts? Much of the recent literature has focused on the role of law firms, but they are only one of several distinct sources. First, there are users, who play fundamentally different roles than third parties who provide documents for use by others. Among those third parties, law firms have to be treated separately because they are subject to distinctive regulatory privileges and requirements. Then it is important to distinguish between third parties who are motivated to innovate by the prospect of direct pecuniary gains, and third parties such as trade associations or academics that are motivated by other factors. Although these different sources of innovation should be treated separately for analytical purposes, in practice the distinctions may become blurred as different types of actors combine and collaborate.¹²⁰

The following sections of this Part will show that these potential sources of innovation differ along several dimensions. First, they vary in terms of their ability to appropriate the pecuniary benefits from innovation and dissemination and in their responsiveness to pecuniary incentives. Second, they vary in terms of their ability to tap into the benefits of learning-by-doing. Third, they vary in terms of their access to previously drafted agreements that might serve as a basis for later innovations. Fourth, they differ in terms of their ability to exploit economies of scale and scope in disseminating documents. Finally, the potential sources of contractual innovation are also likely to vary systematically in terms of their trustworthiness—that is, their inherent

¹¹⁹ Compare Triantis, *supra* note 7, at 34 (“The transparency of contributions to the [wiki] allows a participant to take credit for her postings, edits or comments.”), and Davis, *supra* note 12, at 1095 (“[M]any people volunteer in order to socialize or . . . to obtain status in the eyes of their peers.”), with Yochai Benkler, *Coase’s Penguin, or, Linux and The Nature of the Firm*, 112 YALE L.J. 369, 425–26 & n.96 (2002) (pointing out that the commonly cited “reputation gains” motivation cannot be reconciled with the practices of two of the most successful free software projects, Apache and the Free Software Foundation, neither of which recognizes personal contributions).

¹²⁰ As this article went to press, a law firm announced an alliance—apparently in the form of a licensing agreement—with a provider of legal forms. Jennifer Smith, *Look Out, LegalZoom! Jacoby & Meyers Gets into Legal Forms*, WALL ST. J. L. BLOG (Oct. 3, 2012, 8:34 AM), <http://blogs.wsj.com/law/2012/10/03/look-out-legalzoom-jacoby-meyers-gets-into-legal-forms/>.

ability to help prospective users overcome uncertainty about the effects of adopting novel documents.¹²¹

This last point merits some elaboration because the determinants of trustworthiness will vary depending on the relationship between the drafter and users. When the drafter is a user who presents a novel document to a prospective counterparty, trustworthiness involves the ability to overcome the counterparty's fear that the drafter has responded to the incentive to prepare biased terms that redistribute value in its favor. For instance, it is not unreasonable for consumers to be concerned that modifications proposed by credit card issuers will be prejudicial.¹²² By contrast, if the drafter is a third party, trustworthiness will involve the ability to overcome the users' fear that it has responded to the incentive to minimize drafting effort—who would trust a prenuptial agreement drafted by the paralegals at “Fly-by-Night Docs”? If the user values transferability, then the drafter of a novel contract faces the additional challenge of inspiring confidence that the contract will become widely used. Generally speaking, third parties who already deal with large numbers of users and who can make credible commitments to continue doing so are best positioned to make the case that their documents will become widely used. So for instance, Kahan and Klausner speculate that large underwriters can induce adoption of innovative terms in bond indentures by committing to advise their clients to make a coordinated switch.¹²³

A. Users

The most obvious potential sources of contractual innovation are the users of contracts—the parties to the agreement that the contractual document is intended to record. User innovation can be produced either by one party, as in the case when a firm proposes a new standard form, or by the parties acting jointly, as when the process of negotiation leads to a novel solution to a joint contracting problem.

Users, or at least experienced users, are uniquely suited to producing innovations that enhance incentives because they typically will be most familiar with the scenarios in which the contract will be used, the likely contingencies, and the consequences associated with each

¹²¹ For the definition of “trustworthiness,” see *supra* Part I.C.

¹²² See Bar-Gill & Davis, *supra* note 59, at 19–22 (discussing reasons why contract modifications in consumer transactions will tend to be prejudicial to consumers).

¹²³ Kahan & Klausner, *supra* note 8, at 738 (“The underwriter’s commitment to a term may provide the assurance of future use that early-adopting firms need when network externalities are present.”).

contingency.¹²⁴ In other words, users of contracts are able to learn-by-doing in a way that third parties are not. On the other hand, users may not have the best access to prior documents that might provide a basis for innovation.

Users' incentives to innovate are not necessarily optimal from a social perspective. Users have weak incentives to invest in innovations that produce small benefits for themselves, even if benefits to other users would be large.¹²⁵ Innovations that reduce litigation costs might, for example, fit this description if the odds of any given user experiencing litigation are small.¹²⁶ Users whose documents govern high stakes transactions, or who plan to use the documents repeatedly, stand to gain more from innovation and thus have stronger incentives to innovate.¹²⁷

Users often have incentives to produce innovations that reduce the reading costs borne by members of their organizations, potential counterparties, and transferees. For instance, a large insurance company has an incentive to produce a training manual that explains its policies to its own employees. Similarly, an insurance company, or any other firm that offers standardized contracts of adhesion to large numbers of unsophisticated parties, will have incentives to invest in documents and supplementary materials that are readable and comparable, especially if the counterparties have reason to worry about costly surprises buried in the details of the contractual document. This explains why an insurance company like AFLAC would invest in redrafting its documents in plain language. Sometimes though, no special effort is required to reduce counterparties' reading costs. For instance, both parties may have read the document thoroughly in the course of negotiating its terms.

¹²⁴ On the other hand, an intervening actor, such as the State or a trade organization, may be necessary to overcome coordination problems. See Goetz & Scott, *supra* note 7, at 288 (“[B]y generalizing its implication of terms for particular parties, the state renders more accessible to individual contractors the lessons derived from the pooled experiences of others similarly situated.”); *id.* at 303 (noting that a trade organization representing a big chunk of the potential users “can supply the coordination necessary to overcome the free-rider problems”).

¹²⁵ See *id.* at 292 (“So long as individual contractors are incapable of capturing the full benefits of their innovative expressions, new formulations will be underproduced.”).

¹²⁶ See *id.* at 278–79 (“Accumulated experiences are . . . very important in shaping customary contractual prototypes. . . . As *Frigaliment* illustrates, the production of well-validated, mature formulations is a costly, error-prone process.” (citing *Frigaliment Importing Co. v. B.N.S. Int’l Sales Corp.*, 190 F. Supp. 116 (S.D.N.Y. 1960))).

¹²⁷ *Id.* at 293 (“Certain private organizations—such as trade organizations and law firms—can partially overcome the property rights problem that discourages attempts at contractual innovation.”); Choi & Gulati, *supra* note 8, at 935–36 (noting the hypothesis that actors with a significant market share drive innovation because they are most likely to overcome the public goods problems associated with unpatentable contract innovations).

Users do not necessarily have optimal incentives to disseminate their innovations. In some cases they do—for instance, bond issuers have incentives to distribute their indentures broadly, both to attract purchasers in the primary market and to make them familiar to potential purchasers in the secondary market. Similarly, firms whose contracts govern mass-marketed products such as credit cards¹²⁸ or software¹²⁹ sometimes publish the contracts as part of their marketing efforts. Situations also exist in which innovative contracts will be disseminated automatically as they are shared with and then reused by counterparties who engage in large volumes of transactions. For example, a dealer who is a party to an innovative derivatives contract might disseminate the innovation by replicating it in his agreements with other counterparties. The research conducted for this Article has not turned up any economically significant examples of users sharing contracts without expecting to receive direct economic benefits in return. But, this situation may change with advances in information and communications technology and greater use of mechanisms such as the Harvard Contracts Wiki.¹³⁰

There are also cases in which users' incentives to disseminate innovative contracts are absent. To begin with, users typically will not have any incentive to disseminate contracts beyond current and potential counterparties, even when broader dissemination might help firms facing similar contracting problems in other industries or other countries. Some users will even conceal contracts from potential counterparties for fear of scaring them off.¹³¹ In other cases, there is nothing meaningful to disclose to prospective counterparties because key contractual terms are typically negotiated individually. In addition, there is the natural incentive to restrict dissemination in order to discourage copying by competitors. Finally, the pace of dissemination through re-use will be slow in cases of contracts that the parties use only infrequently with new counterparties—for most firms, corporate

¹²⁸ For examples of credit card agreements, see *Find Sample Credit Card Agreements*, BANK OF AMERICA, <https://www.bankofamerica.com/credit-cards/displayPdfListingForAllCards.action> (last visited Jan. 30, 2013), where the bank offers a variety of sample credit card agreements for prospective customers to peruse.

¹²⁹ See, e.g., Marotta-Wurgler, *supra* note 78, at 321 (finding that forty-eight percent of a sample of End-User License Agreements collected from firms that sell software online were available online prior to purchase).

¹³⁰ See THE HARVARD LAW SCHOOL CONTRACTS WIKI, http://hub.law.harvard.edu/contracts_wiki (last visited Jan. 30, 2013) (permitting users of the website to suggest contractual provisions designed to respond to specified contingencies and comment on other users' suggestions).

¹³¹ See Marotta-Wurgler, *supra* note 78, at 321 (finding that fifty-two percent of End-User License Agreements were only available after purchase but rejecting the claim that this statistic reflected sellers' efforts to hide one-sided terms from consumers).

acquisition agreements would be cases in point. In all of these situations, there is a considerable risk that innovative contracts will simply remain in the drawers of the users who have developed them.

B. Law Firms

In most states, lawyers and their law firms have legally sanctioned monopolies on dispensing individualized legal advice, which is frequently defined to include (a) drafting documents with legal effects and (b) representing people in judicial dispute resolution.¹³² Both of these types of work encourage lawyers to maintain up-to-date knowledge of the law and give them privileged access to a stock of contractual documents. That knowledge is also valuable in the production of contracts. In theory, the resulting synergies should give lawyers advantages over other producers of contractual documents, and these advantages should carry over to the production of contractual innovations. Lawyers should be especially well-placed to generate innovations that respond to changes in the applicable law or information revealed by disputes in which they are involved. Even in-house lawyers who represent a single user enjoy these advantages to some extent. Therefore, to the extent contractual innovation occurs within organizational users, it is likely to be produced by their in-house lawyers. The advantages listed above are particularly significant, however, for lawyers in law firms who can draw on experiences earned while representing many different users.

Despite these considerations, the theoretical framework developed in this Article provides ambiguous predictions about whether law firms will be significant sources of contractual innovation. Like other non-users, law firms will find it difficult to appropriate the gains from producing contractual innovations. It is also important to keep in mind that many law firms are large organizations that specialize in producing financial contracts and material contracts for companies with many outside investors. On the one hand, the high stakes in these contracts suggest that the benefits of innovation will be large relative to the costs. On the other hand, the need to make the contracts familiar to third parties limits the benefits of innovation.¹³³ Finally, law firms have limited incentives to distribute innovative contracts beyond their fee-paying clients. This kind of dissemination may help

¹³² AM. BAR ASSOC., REPORT OF THE TASK FORCE ON THE MODEL DEFINITION OF THE PRACTICE OF LAW 4, n.9–10 (2003) (describing state laws restricting unauthorized practice of law).

¹³³ See *supra* Part I.B (analyzing factors that contribute to the value of contractual innovation).

to attract new clients, but it may result in some loss of competitive advantage for the firm.

C. For-Profit Producers

Law firms are not the only types of firms that produce contractual documents for use by others. Some of their competitors focus exclusively on producing legal documents. In addition to contractual documents, many of these businesses sell documents such as wills, powers of attorney, or articles of incorporation.¹³⁴ Many others offer contractual documents alongside or bundled together with related goods or services. Firms such as Bloomberg, LexisNexis, and Westlaw provide access to contractual documents along with access to databases containing a wide variety of legal and non-legal information.¹³⁵ Some firms provide legal documents along with services such as incorporations, patent applications, and searches.¹³⁶ Another strategy is to supply customers with a document together with a referral to an attorney who can advise them on its effects and suitability for their purposes.¹³⁷ Other businesses supply documents together with software that helps users store and modify the documents.¹³⁸ Still others offer documents together with opportunities to purchase advertising space on the webpages that host them.¹³⁹ Some vendors use computer software to draft customized contracts based on customers' responses to detailed questions about their objectives and circumstances.¹⁴⁰

¹³⁴ An example of this is U.S. Legal Forms, Inc., an online store for legal forms and documents providing over 36,000 forms. *About U.S. Legal Forms, Inc.*, U.S. LEGAL FORMS, <http://www.uslegalforms.com/about/> (last visited Jan. 30, 2013). See generally SUSSKIND, *supra* note 11, at 100–05 (discussing the ever-expanding use of automated legal document assembly and its adverse effects on the legal profession); Kobayashi & Ribstein, *supra* note 11, at 1171 (“[L]egal software and other new technologies are squeezing small law firms and sole practitioners.”).

¹³⁵ See, e.g., *LexisNexis Precedent Search*, LEXISNEXIS, <http://law.lexisnexis.com/communityportal/articles/articles.aspx?g=QFsTyLJIUSs=&c=S61RDZGNKnw=&a=PcrQFeXKXis=> (last visited Jan. 30, 2013) (“Turn to new LexisNexis Precedent Search to . . . [g]et access to more than a half million current model agreements—that’s millions of precedent clauses and defined terms—including those drafted by the nation’s top law firms.”).

¹³⁶ See, e.g., LEGALZOOM, <http://www.legalzoom.com> (last visited Jan. 30, 2013) (offering a variety of legal documents for both business and personal purposes).

¹³⁷ See, e.g., ROCKET LAWYER, <http://www.rocketlawyer.com> (last visited Jan. 30, 2013) (featuring a user interface that offers simultaneous equal access to both document creation and lawyer referrals).

¹³⁸ See, e.g., *About Us*, BIZTREE, <http://www.biztree.com> (last visited Jan. 30, 2013) (describing Business-in-a-Box product which includes legal document template software).

¹³⁹ See, e.g., ONECLE, <http://www.onecle.com> (last visited Jan. 30, 2013) (featuring advertisements that link to legal document providers next to example documents).

¹⁴⁰ See, e.g., ROCKET LAWYER, <http://www.rocketlawyer.com> (last visited Jan. 30, 2013); *Westlaw Form Builder*, WESTLAW, <http://store.westlaw.com/westlaw-form-builder-business->

All third-party providers of contractual documents have incentives to disseminate their documents by publishing them and making them searchable. By providing access to many kinds of documents through the same channels, these providers can exploit economies of scale and scope in the development of dissemination mechanisms. To the extent they deal with novice users, third-party providers probably also have incentives to make their documents readable. Some users may feel more comfortable with documents written in incomprehensible legalese, but it seems reasonable to presume that more people will be comfortable with documents that are at least superficially comprehensible.

It is less clear that non-law firm third-party providers have incentives to innovate in ways that enhance the intrinsic value of contracts, such as by ensuring that their documents create the desired incentive effects and are adapted to changes in the legal environment. This situation arises mainly because the unsophisticated casual users targeted by many of these firms are likely to be uncertain of the value of innovations and have no particular reason to trust most third-party providers. These firms expressly disclaim any intention to provide documents that are tailored to the needs of specific users, presumably because to do otherwise would violate prohibitions on the unauthorized practice of law.¹⁴¹

Providers of legal databases may be exceptions. These firms are in the business of accumulating comprehensive information about changes in the law, disputes litigated in public fora, and increasingly, executed contracts filed with government agencies. It should not be difficult for them to track the subset of that information relevant to particular contractual documents. For example, it should not be difficult for a firm that is compiling a database of judicial decisions to run a daily search for decisions quoting the language from specific documents.¹⁴² Such a firm should also have the expertise to search the database of contracts filed with the Securities and Exchange

transactions-solution-westlawnext-pro/182455/41172130/productdetail (last visited Jan. 30, 2013).

¹⁴¹ For example, fine print at the bottom of LegalZoom's website states: "Disclaimer: Communications between you and LegalZoom are . . . not [protected] by the attorney-client privilege or as work product. LegalZoom provides access to independent attorneys and self-help services at your specific direction. We are not a law firm or a substitute for an attorney or law firm." LEGALZOOM, <http://www.legalzoom.com/> (last visited Jan. 30, 2013).

¹⁴² Some law firms may, however, have superior access to information about unreported disputes such as commercial arbitrations. Arbitral awards often are not published but law firms that represent parties in arbitrated disputes will automatically have access to the resulting awards and can use the knowledge they extract from those awards in drafting contracts for other clients.

Commission (SEC) for language capturing a concept it would like to add to an existing document. As a result, legal database providers ought to have the capacity to generate contractual innovations designed to respond to changes in the legal environment.¹⁴³ This segment of the legal database industry is also highly concentrated, presumably because the high fixed costs of creating these databases pose prohibitive barriers to entry.¹⁴⁴ Consequently, each of these legal database firms tends to have access to large numbers of potential users. This should enhance their ability to convince users that innovative documents will be widely used. For all these reasons, legal database firms should be able to give law firms a run for their money in generating and marketing innovative contracts, especially if they offer to customize contracts to fit customers' needs. Their incentives to innovate are, however, still muted by the difficulty of communicating the value of their innovations to prospective users.

1. Trade Associations

Trade associations are organizations with mandates to promote the welfare of their member firms, and in some cases, the industry as a whole. Many trade associations produce standard form contracts designed for the use of industry participants. Some distribute them free of charge to the public, some limit access to fee-paying members, and some charge substantial amounts for access to the documents.

There are several reasons why trade associations are likely to be sources of innovation. First, trade associations have strong incentives to innovate because they are particularly well-positioned to

¹⁴³ Consider the following offerings from one major legal database provider: "Save significant time drafting Business forms and documents with Westlaw Forms Complete Business Transactions Solution. This collection provides you access to 600 buildable Business forms, with no charge linking to related content, including state and federal codes, primary law and related analytical materials, on WestlawNext." *Westlaw Form Builder*, WESTLAW, <http://store.westlaw.com/westlaw-form-builder-business-transactions-solution-westlawnext-pro/182455/41172130/productdetail> (last visited Jan. 30, 2013). "Sample Agreements gives you access to millions of legal documents with language, clauses, and provisions written by leading law firms. You'll have the help you need when drafting your own transactional documents, and you can gain a competitive advantage by seeing how other attorneys address circumstances similar to yours." *Sample Agreements*, WESTLAW, <http://store.westlaw.com/westlaw/transactional/sample-agreements/default.aspx> (last visited Jan. 30, 2013).

¹⁴⁴ Until recently, the three largest global players—Thomson Reuters's Westlaw, Wolters Kluwer, and Reed Elsevier's LexisNexis—together held over seventy percent of the global market share in the legal, tax, and regulatory information industry. Bloomberg recently acquired the Bureau of National Affairs (BNA), previously the seventh largest global provider. David Curle, *The Big Four Legal, Tax & Regulatory Players: Strategic Analysis*, OUTSELL INC., available at <http://www.outsellinc.com/store/products/1089-the-big-four-legal-tax-regulatory-players-strategic-analysis> (promotional summary).

appropriate the resulting benefits. To the extent that the benefits flow to its members, the association can recoup those benefits through membership fees.¹⁴⁵ Second, trade associations may have privileged access to documents, information, and ideas from their members. Users may be willing to contribute to a trade association–led drafting project on a voluntary basis when they would not be willing to do so for another user or an entity like a law firm or a legal database provider.¹⁴⁶ Third, as nonprofits, trade associations benefit from more favorable tax treatment than for-profits.¹⁴⁷ Fourth, trade associations may be relatively trustworthy. In the absence of a profit motive, and with an appropriate governance structure, a trade association has incentives to abide by commitments to produce fair and balanced contracts.¹⁴⁸ Fifth, a trade association with broad membership may have the ability to induce a large proportion of its members to adopt a new contract.¹⁴⁹

The most sophisticated trade associations invest in both innovation and dissemination.¹⁵⁰ A good example is the AIA. It regularly updates its contracts to take account of new developments, including changes in construction practices and recent judicial decisions.¹⁵¹ The AIA also invests in making its documents easy to adopt. For example, all of the AIA’s documents are available in both paper and electronic formats. The electronic versions are embedded in a software package that contains blank documents and allows users to save completed documents together with data about the changes that have been made

¹⁴⁵ Davis, *supra* note 12, at 1088 (“[T]rade associations may find it relatively easy to translate benefits and costs that accrue to their members into financial returns because they may be able to recover the net benefits that accrue to their members by imposing some sort of levy.”). In her comment on this Article Lisa Bernstein expands on this point by describing benefits that trade associations provide to their members and which make it worthwhile for firms to incur the costs of membership. See Lisa Bernstein, *Copying and Context: Tying as a Solution to Lack of Intellectual Property Protection of Contract Terms*, 88 N.Y.U. L. REV. ONLINE (forthcoming 2013), <http://www.nyulawreview.org/online-features/bernstein>.

¹⁴⁶ See Davis, *supra* note 12, at 1093–95 (discussing the role of volunteers in nonprofit initiatives).

¹⁴⁷ See *id.* at 1096–97 (describing the tax benefits that accompany nonprofit status).

¹⁴⁸ See *id.* at 1090–91 (discussing the greater credibility of nonprofits, relative to for-profit organizations).

¹⁴⁹ *Id.* at 1092–93.

¹⁵⁰ See Bernstein, *supra* note 145.

¹⁵¹ See *Revision Policy*, AM. INST. OF ARCHITECTS, <http://www.aia.org/contractdocs/AIAS076676> (last visited Jan. 30, 2013) (stating that in order to “reflect the best, most up-to-date legal trends and building industry practices” and to “maintain such a high level of accuracy and timeliness,” the AIA maintains a documents revision policy that “requires periodic republishing of new editions and, after a stated grace period, withdrawal of prior editions from the marketplace”).

to the standard form.¹⁵² The latest version of the software package is fully integrated with popular word processing and spreadsheet programs, permitting data such as costs for the various components of a construction project to be drawn directly from a spreadsheet.¹⁵³ The AIA also publishes synopses of each document, clause-by-clause guides, podcasts, and offers online training courses.¹⁵⁴ Some of these materials are specifically designed to explain the impact of revisions to the documents.¹⁵⁵

At least one trade association goes a step further toward reducing the uncertainty associated with its documents and intervenes directly in litigation concerning the documents it produces. Since 2000, the ISDA has filed amicus briefs in over twenty cases, many of which involved interpretation of the documents it produces.¹⁵⁶

2. Academics

In other contexts, academics play a significant role in innovation. Little attention has been paid to the role of academics in contractual innovations. One would think that academics' ability to contribute to innovation would be constrained by their relatively limited access to up-to-date contracts and to the kinds of information about user needs derived from direct experience. However, academics have generated at least a few examples of contractual innovations. Dr. Richard Sandor was a key innovator in the development of both mortgage interest rate futures and futures linked to catastrophic events.¹⁵⁷ Mohammad Yunus, a former academic, is credited with the invention of microlending.¹⁵⁸ A coalition of academic lawyers and computer

¹⁵² See Am. Inst. of Architects, *Introducing the New AIA Contract Documents*, YOUTUBE (May 11, 2011), <http://www.youtube.com/watch?v=a7L7GeitDVK>.

¹⁵³ See *Contract Documents*, AM. INST. OF ARCHITECTS, <http://www.aia.org/contractdocs/index.htm> (last visited Jan. 30, 2013).

¹⁵⁴ See *Reference Material*, AM. INST. OF ARCHITECTS, <http://www.aia.org/contractdocs/referencematerial/index.htm> (last visited Jan. 30, 2013).

¹⁵⁵ See, e.g., Suzanne Harness & Phil Simon, Am. Inst. of Architects, *2007 AIA Contract Documents: What's New?*, BLUESKYBROADCAST.COM, https://live.blueskybroadcast.com/bsb/client/CL_DEFAULT.asp?Client=643475&PCAT=2773&CAT=2773 (last visited Jan. 30, 2013) ("Explore the revisions to the AIA's major construction contract documents and how these revisions may affect [the user].").

¹⁵⁶ See *Amicus Briefs*, ISDA, <http://www2.isda.org/functional-areas/legal-and-documentation/amicus-briefs> (last visited Jan. 30, 2013) (compiling amicus briefs filed by ISDA).

¹⁵⁷ See RICHARD L. SANDOR, *GOOD DERIVATIVES: A STORY OF FINANCIAL AND ENVIRONMENTAL INNOVATION* 55–56, 243–45 (2012) (discussing Sandor's early insight and contribution to the development of these new markets).

¹⁵⁸ See Devon K. Roepcke, "Should I Stay or Should I Go?": *Preventing Illegal Immigration by Creating Opportunity in Mexico Through Microcredit Lending*, 38 CAL. W. INT'L L.J. 455, 458 (2008) ("Microcredit is a concept that began in Bangladesh with a man

scientists founded Creative Commons.¹⁵⁹ These examples provide modest evidence that academics (or former academics) and their collaborators can be involved in the process of creating novel sets of obligations. The academics apparently were motivated principally by intellectual curiosity, altruism, and possibly the desire for intellectual recognition rather than pecuniary benefits.

Academic actors that are inclined to innovate are probably also inclined to invest in disseminating those innovations, subject to resource constraints. For example, Creative Commons makes its innovative licenses freely available and does not appear to be motivated, either directly or indirectly, by economic benefits accruing to any discrete group of users. Its stated objective is to “increase the amount of creativity (cultural, educational, and scientific content) available in ‘the commons’—the body of work that is available to the public for free and legal sharing, use, repurposing, and remixing.”¹⁶⁰

Academic institutions and other mission-driven organizations are also well suited to establish and maintain platforms that disseminate user innovations. For example, the University of Missouri–Columbia has sponsored the creation of a large collection of contracts culled mainly from filings with government agencies.¹⁶¹ The contracts wiki established by Harvard Law School is a means of disseminating innovative proposals on a clause-by-clause basis.¹⁶²

IV

IMPLICATIONS FOR PUBLIC POLICY

Users and law firms have limited incentives to disseminate their work. Other for-profit providers have incentives to invest in dissemination but may not have strong incentives to invest in improving the intrinsic quality of their documents. Trade associations and academic

named Muhammad Yunus.”). *But see* Rebecca Farrer, *Exploring the Human Rights Implications of Microfinance Initiatives*, 36 INT’L J. LEGAL INFO. 447, 454 n.28 (2008) (“While Muhammad Yunus is often credited as having created microfinance . . . the Self Employed Women’s Association (‘SEWA’) predated Yunus’s first loan and Grameen Bank.”); Molly Richardson, Note, *Increasing Microlending Potential in the United States Through a Strategic Approach to Regulatory Reform*, 34 J. CORP. L. 923, 926 (2009) (“ACCION and Muhammad Yunus, founder of the Grameen Bank, claim to have both independently pioneered the concept of microcredit.”).

¹⁵⁹ Ben Adida, *Creative Commons Announced*, CREATIVE COMMONS (Oct. 16, 2002), <http://creativecommons.org/press-releases/page/17>.

¹⁶⁰ *What Is Creative Commons*, CREATIVE COMMONS, http://wiki.creativecommons.org/images/3/35/Creativecommons-what-is-creative-commons_eng.pdf (last visited Jan. 30, 2013).

¹⁶¹ *The CORI K-Base*, CORI, <http://cori.missouri.edu/pages/ksearch.htm> (last visited Jan. 30, 2013) (“Most of the contracts in the collection are executed agreements made available in public disclosure filings or in filings with a regulatory agency.”).

¹⁶² *See* THE HARVARD LAW SCHOOL CONTRACTS WIKI, *supra* note 130.

actors, on the other hand, may be important sources of additional innovation and often have incentives to disseminate their products. Nonetheless, it is plausible that the overall supply of contractual innovation will be sub-optimal.

This in turn suggests that some form of public intervention ought to be considered. The extent to which judicially implied terms should be used as substitutes for contractual innovation has been analyzed extensively by Goetz and Scott.¹⁶³ Equally thorough analysis of other possible interventions is beyond the scope of this Article. In the hopes of inspiring others to explore these issues, here are some preliminary thoughts about three possible interventions: (1) enhancing intellectual property rights, (2) loosening restrictions on who is authorized to practice law, and (3) expanding the role of public actors in disseminating contracts.

A. *Intellectual Property Rights*

One way to stimulate innovation might be to strengthen intellectual property rights over contractual documents.¹⁶⁴ This could be done, for instance, by allowing copyright holders to prevent copying of works that are “derived” from—as opposed to close-to-literal copies of—their documents. This would enhance drafters’ legal rights to appropriate the benefits their documents confer upon copiers and thereby increase the pecuniary benefits of innovation. This should in turn serve to stimulate innovation by actors motivated by the prospect of pecuniary gains.

Enhancing intellectual property rights is undesirable to the extent that rights-holders fail to conclude licensing agreements with people who would derive benefits from copying or who would generate benefits for others by using the copy as a basis for further innovation. This kind of bargaining failure may occur because of the costs associated with identifying rights holders and agreeing upon the terms of or drafting licensing agreements.¹⁶⁵ Suppose, for example, that the AIA is willing in principle to license its documents but does not manage to conclude licenses with all potential copiers. In this scenario, the cost to society includes the losses suffered by people who are driven to less

¹⁶³ See Goetz & Scott, *supra* note 7, at 273–80 (discussing the functions and sources of implied terms); see also Davis, *supra* note 18, at 13 (arguing that optimal interpretive rules will vary depending on the stock of available contractual documents).

¹⁶⁴ See Goetz & Scott, *supra* note 7, at 292 (“The limits of copyright law create an initial barrier to innovation by denying contractors substantial property rights in their formulations.”); see also Kobayashi & Ribstein, *supra* note 11, 1193–94 (discussing the costs and benefits of providing intellectual property protection for contracts).

¹⁶⁵ See Lemley, *supra* note 109, 1048–67 (describing impediments to successful bargaining with improvers of initial innovations).

valuable substitutes. If those people would have drafted innovative improvements on the AIA forms, then the cost to society will also include the losses suffered by anyone who would have copied the improved documents. Or to take another example, suppose that law firms and other parties were able to assert copyright over documents filed with the SEC. Database providers such as LexisNexis would have to negotiate licenses with each author before compiling the documents in a database. If the costs of negotiating such licenses prove to be prohibitive, society will lose the benefit of any innovative search tools that LexisNexis would have developed.

Intellectual property rights might also be problematic in a more fundamental sense. They may allow rights-holders to appropriate the benefits of copying documents that are valuable simply because they are familiar, rather than because of their intrinsic value. This kind of redistribution of value to drafters can be particularly problematic when the potential copiers are competitors. Take, for example, an insurance company whose policy has become familiar purely by happenstance—perhaps because it happened to be the object of judicial interpretation—rather than because it represents any particularly valuable innovation. Permitting the incumbent company to bar competitors from using the standard form gives it an advantage over those competitors, including those who are able to offer the same policy at a lower price. This kind of anti-competitive effect is socially costly and, as in this example, the social costs need not be offset by the benefits of innovation.

B. Regulation of Unauthorized Practice of Law

Another way to stimulate the supply of contractual innovation might be to relax restrictions on what types of actors are permitted to engage in the practice of law.¹⁶⁶ As we have already noted, prohibitions on unauthorized practice of law can be interpreted to prevent firms that are not law firms from drafting contracts. The more tailored the contract is to the needs of an individual user, the more likely it is to run afoul of these prohibitions. As noted above, some online vendors attempt to tailor forms to fit customers' needs. The more tailored the form purports to be, the greater the risk of the firm being liable for unauthorized practice of law.¹⁶⁷

¹⁶⁶ See Kobayashi & Ribstein, *supra* note 11, at 1218 (“This Article’s summary of many potential legal information innovations that are constrained by licensing laws shows how the rise of the legal information market intensifies arguments for reexamining lawyer licensing laws.”).

¹⁶⁷ See, e.g., *Janson v. LegalZoom.com, Inc.*, 271 F.R.D. 506, 508 (W.D. Mo. 2010) (alleging that the online document preparation service known as LegalZoom was engaged

The rules concerning who is authorized to engage in the practice of law also make it difficult to create hybrid entities that both engage in the practice of law and produce contractual documents. This is because U.S. lawyers are typically barred from splitting fees with or practicing jointly with nonlawyers.¹⁶⁸ So, for example, it would not be possible for Bloomberg Law to create an in-house law firm, complete with external clients, to capitalize on the experience of the firm's lawyers when updating the documents in the Bloomberg Law database.

This regulatory scheme may well be justified on consumer protection grounds. It does, however, come at the cost of giving free-standing law firms exclusive rights to draft certain types of documents. This is costly to society to the extent that competition from other types of producers, including alliances between law firms and other types of entities, is desirable. There are plausible reasons to believe that other types of producers will have inherent advantages over law firms in producing innovative contracts. Even if those other producers do not have any clear-cut advantages over law firms, additional competition may be intrinsically desirable.¹⁶⁹

C. Dissemination by Public Actors

Public dissemination by governments or other public actors can also help to address concerns about inadequate dissemination of innovative contracts. Private actors can enhance the impact of dissemination by public actors by republishing data obtained from the public sector and providing additional search tools.

in the unauthorized practice of law in violation of a Missouri statute); Complaint at 2–3, *Webster v. LegalZoom.com, Inc.*, No. BC438637 (L.A. Super. Ct. Apr. 18, 2012) (asserting that the plaintiff had to hire a lawyer to remedy the problems with a living will she purchased through LegalZoom). Complaints denouncing LegalZoom have been issued, in the form of cease-and-desist letters and advisory opinions, by various groups including the Supreme Court of Ohio's Board on the Unauthorized Practice of Law, the North Carolina State Bar, the Connecticut Bar Association, and the Pennsylvania Bar Association. Catherine J. Lanctot, *Does LegalZoom Have First Amendment Rights?: Some Thoughts About Freedom of Speech and the Unauthorized Practice of Law*, 20 TEMP. POL. & CIV. RTS. L. REV. 255, 258–60 (2011). For a discussion of whether the preparation of legal documents constitutes the unauthorized practice of law, see *id.* at 261–65.

¹⁶⁸ See MODEL RULES OF PROF'L CONDUCT R. 5.4(a)–(b) (2011) (noting that, subject to exceptions, “[a] lawyer or law firm shall not share legal fees with a nonlawyer” and “[a] lawyer shall not form a partnership with a nonlawyer if any of the activities of the partnership consist of the practice of law”). See generally Paul D. Paton, *Multidisciplinary Practice Redux: Globalization, Core Values, and Reviving the MDP Debate in America*, 78 FORDHAM L. REV. 2193, 2198–216 (2010) (offering an historical account of the multidisciplinary practice (MDP) debates and their ultimate rejection of fee-sharing between lawyers and nonlawyers).

¹⁶⁹ Kobayashi & Ribstein, *supra* note 11, at 1218 (arguing that analyzing legal information with the same tools applied to innovation generally could create a “robust legal information market”).

In the U.S., the most notable example of this phenomenon is the SEC, whose rules require publicly listed firms to file material contracts with it.¹⁷⁰ These filings are made available online through the SEC's Electronic Data Gathering, Analysis, and Retrieval (EDGAR) database.¹⁷¹ This disclosure requirement is designed primarily to aid in corporate governance by making it easier for investors to obtain information about the economic condition of issuers of securities.¹⁷² In other words, the main objective is to elicit information about the impact of the contract on its user. But the filing requirement has the added effect of compelling dissemination of the contract itself. Several private intermediaries have built databases of contracts relying primarily on contracts filed with the SEC.¹⁷³ The impact of this particular rule is, of course, limited to the types of contracts that qualify as material to publicly traded firms subject to U.S. law. Other freely accessible government-sponsored databases of contracts in the United States include the Federal Energy Regulatory Commission's (FERC) database,¹⁷⁴ which contains a variety of agreements filed by regulated utilities, and the California Electronic Access to Securities Information and Franchise Information Database, which contains franchise agreements.¹⁷⁵

Few public agencies appear to disseminate contracts for their intrinsic value. An exception is the World Bank, which has compiled a database of sample agreements relating to infrastructure projects structured as public-private partnerships.¹⁷⁶ The database is part of a broader effort to help developing countries improve the quality of

¹⁷⁰ Regulation S-K, 17 C.F.R. § 229.601(a), (b)(10) (2012). Item 1.01 of Form 8-K requires issuers to promptly disclose summaries of new material contracts. See 17 C.F.R. § 240.13a-11 (2011); Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date, 69 Fed. Reg. 15,594, 15,595-96 (Mar. 25, 2004).

¹⁷¹ *Search the Next-Generation EDGAR System*, SEC. & EXCH. COMM'N, <http://www.sec.gov/edgar/searchedgar/webusers.htm> (last visited Jan. 30, 2013).

¹⁷² When it proposed to introduce the requirement to promptly disclose summary information about material contracts, the SEC said: "We propose these amendments to provide investors with better and faster disclosure of important corporate events." Proposed Rule: Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date, 67 Fed. Reg. 42,914, 42,914 (proposed June 25, 2002).

¹⁷³ See, e.g., *The CORI K-Base*, *supra* note 161 ("Currently, the collection is primarily drawn from filings with the U.S. Securities and Exchange Commission's (SEC's) EDGAR Database."). Bloomberg Law's DealMaker document database is also based on documents from EDGAR. See *DealMaker Documentation: Document Search*, BLOOMBERG, <http://www.bloomberglaw.com/document/X2O5DG8> (last visited Feb. 5, 2013).

¹⁷⁴ *FERC eLibrary*, FED. ENERGY REGULATORY COMM'N, <http://www.ferc.gov/docs-filing/elibrary.asp> (last visited Jan. 30, 2013).

¹⁷⁵ *California Electronic Access to Securities & Franchise Information*, CAL. DEP'T OF CORPS., <http://www.corp.ca.gov/CalEASI/caleasi.asp> (last visited Jan. 30, 2013).

¹⁷⁶ See *PPP in Infrastructure Resource Center: For Contracts, Laws and Regulation* (PPPIRC), WORLD BANK, <http://ppp.worldbank.org/public-private-partnership/> (last vis-

their infrastructure with private involvement and is funded by a group of government-sponsored aid agencies.¹⁷⁷

CONCLUSION

Prominent scholars have expressed concern about the volume of contractual innovation, especially in modern U.S. law firms.¹⁷⁸ This Article suggests that though important, the volume of contractual innovation that takes place in law firms is not necessarily of broad social concern. Of greater interest is the overall volume of innovation in society and, as noted above, there are many sources of contractual innovation besides law firms.

Other potential producers of innovation face significant obstacles. The obstacle posed by inability to appropriate the pecuniary benefits earned by copiers is well known. But there are other ways of deriving pecuniary benefits from innovation. This is most obvious in the case of user-innovators, whose benefit from innovation will not be commensurate with the social benefits but may still be substantial. There are also a variety of indirect pecuniary benefits associated with producing innovative contracts. Finally, some innovators may not be motivated primarily by pecuniary benefits.

Of greater significance may be regulatory barriers to innovation such as the prohibitions on unauthorized practice of law that discourage firms that are not wholly owned by attorneys from producing customized contractual documents. Also of great significance are the factors that discourage innovators from disseminating their contracts. Dissemination, both to users and potential innovators, is crucially important to realizing the value of contractual innovations. The obstacles to dissemination, particularly for user-innovators, have not received sufficient attention in the recent literature. Those obstacles, as well as public interventions that might either assist private actors in overcoming them or supplant private actors entirely, all warrant further study.

ited Jan. 30, 2013) (describing the World Bank's library of public-private partnership-related documents).

¹⁷⁷ See *About PPIRC*, WORLD BANK, <http://ppp.worldbank.org/public-private-partnership/about-ppirc> (last visited Jan. 30, 2013) (listing the government-sponsored aid agencies that fund the PPIRC).

¹⁷⁸ See Gulati & Scott, *supra* note 8, at 101–08.