
THE LONG CONVERGENCE: “SMART CONTRACTS” AND THE “CUSTOMIZATION” OF COMMERCIAL LAW

G. MARCUS COLE*

INTRODUCTION

The rise of “smart contracts”—self-executing agreements built into computer code across distributed, decentralized blockchain networks—is the most recent step in the long convergence of contract law around the world. Smart contracts permit what has only been approximated before. Namely, they allow for the “customization” of contract law itself to fit the precise needs and circumstances of the parties to the transactions. This customization of contract law is only part of the long convergence. Indeed, for generations, all of commercial law has been moving towards satisfying the demand in the market for an efficient, effective law of commerce. This convergence is the natural result of an increasingly competitive market for the provision of the “product” we call commercial law. Like any other market, as it becomes more competitive, the products offered by suppliers—in this case, contract law—tend toward convergence.

Bespoke law is the natural end product of this competition and the resultant long convergence.

While smart contracts may be signaling that the convergence towards customized contract law is nearly complete, it is not a new or isolated

*. Joseph A. Matson Dean of the Law School and Professor of Law, University of Notre Dame; William F. Baxter – Visa International Professor of Law, Emeritus, Stanford University. I thank Brian Bix, Michelle Boardman, Curtis Bridgeman, Vanessa Casado Perez, Miriam Cherry, Yun-chien Chang, Jonathan Choi, Billy Christmas, Robert Cooter, Giuseppe Dari-Mattiacci, Charles Delmotte, Richard Epstein, Andrew Gold, Robert Hilman, Stefanie Jung, Kimberly Krawiec, Saul Levmore, Alan Meese, Robert Miller, Adam Mossoff, Mark Movesian, Nate Oman, Ariel Porat, Mario Rizzo, Aaron Simowitz, Henry Smith, and participants at New York University Classical Liberal Institute’s symposium on Convergence and Divergence in Private Law.

development. In fact, it is at least several hundred years old and has been occurring across most of commercial law. Since the emergence of the *lex mercatoria*, or the Law Merchant, along the commercial crossroads and marketplaces of medieval Europe, merchants, their suppliers, and their customers have sought and shaped an efficient commercial law to meet the needs of trade.¹ Although the *jus commune* of the Middle Ages provided a common law throughout continental Europe, it was the merchants themselves who developed their own specialized—if not customized—law for commerce.²

The wealth generated by these merchants and their courts caused states to take notice. It should come as no surprise that the Law Lords of England embraced and adopted the Law Merchant at the dawn of the Industrial Revolution.³ When England's colonies formed states of their own, they too saw the need for a common or universal commercial law.⁴ The disaggregated nineteenth-century states that would ultimately unite to form modern Germany, as well as the United States of America, confronted the same problem: how to conduct trade across multiple jurisdictions with their differing laws of commerce.⁵ Although the German legal scientists were able to craft the German Commercial Code in 1861, their counterparts in the United States failed to develop a universal, all-encompassing commercial code until the codification movement resulted in the Uniform Commercial Code (the "UCC") in the twentieth century.⁶

1. See generally HENRI PIRENNE, *MEDIEVAL CITIES: THEIR ORIGINS AND THE REVIVAL OF TRADE* (Frank D. Halsey trans., Princeton Univ. Press 1974) (1927) (arguing that the expansion of medieval cities was attributable to a growth in continental trade).

2. See Bruce L. Benson, *The Spontaneous Evolution of Commercial Law*, 55 S. ECON. J. 644, 647 (1989) ("The development of commercial law was almost entirely left up to the merchants themselves."); see also J.H. Baker, *The Law Merchant and the Common Law before 1700*, 38 CAMBRIDGE L.J. 295, 303 (1979) ("By avoiding the forms which could be sued upon . . . in the common-law courts, [the merchants] gave themselves more flexibility."). Legal historian Emily Kadens disputes the widely-disseminated notion that the Law Merchant was an organic body of law dissociated from principalities and other government enforcement institutions. Emily Kadens, *The Myth of the Customary Law Merchant*, 90 TEX. L. REV. 1153, 1153–61 (2012).

3. See F.C.T. Tudsbury, *Law Merchant and the Common Law*, 34 L.Q. REV. 392, 394 (1918) ("[T]he usages of merchants and traders . . . ratified by the decisions of courts of law . . . has become engrafted upon, or incorporated into, the Common Law, and may thus be said to form part of it." (quoting Cockburn, C.J., in *Goodwin v. Robarts* (1875) 10 L.R. Exch. 337 (Eng.))).

4. See CHARLES M. COOK, *THE AMERICAN CODIFICATION MOVEMENT* 109 (1981).

5. *Id.*; see also Wienczyslaw J. Wagner, *Codification of Law in Europe and the Codification Movement in the Middle of the Nineteenth Century in the United States*, 2 ST. LOUIS U. L.J. 335, 341 (1953) (dating the origins of the German codification movement to the Prussian Civil Code of 1794).

6. See Johannes W. Flume, *Law and Commerce: The Evolution of Codified Business Law in Europe*, 2 COMP. LEGAL HIST. 45, 57 (2014) (detailing the promulgation of the German Commercial Code of 1861); Gunther A. Weiss, *The Enchantment of Codification in the Common-Law World*, 25 YALE J. INT'L L. 435, 520–27 (2000) (tracing the development of the UCC to the history of codification efforts

Although the conscious effort to bring about harmony in American commercial law can be traced back to the common law codification movement's origins in the early nineteenth century, success was not achieved until the middle of the twentieth century.⁷ As transportation and communications technology improved the ability of large businesses to engage in interstate commerce, a need arose to reduce the transaction costs associated with disparate legal regimes among the various states. The UCC arose as the triumphant product of coordinated efforts to harmonize business law, all while preserving the dignity of state sovereignty within the United States.⁸

The last four decades have seen considerable movement toward a universal law of contracts across disparate legal regimes. This movement spread beyond the borders of the United States, with the promulgation of the Vienna Convention on the International Sale of Goods (the "CISG") in 1980.⁹ The CISG accelerated the progress of a centuries-old arc of convergence of the various legal regimes governing commercial law over the last four-hundred years. The CISG was itself the spitting-image offspring of its forebearer, the UCC, originally submitted to the legislatures of the fifty United States back in 1951.¹⁰

Both the UCC and CISG were answers to a sticky problem: how can business be efficiently conducted across political borders without violating the sovereign integrity and law-provision authority of the states involved? The answer, embodied in the UCC and the CISG, was to humbly ask the relevant states to adopt uniform laws for transactions within each of their respective jurisdictions, so as to lower the costs associated with all transactions.¹¹

This movement towards convergence has progeny. In 1999, the National People's Congress of the People's Republic of China adopted the New Contract Law, which becomes effective on January 1, 2000.¹² This law

in both Europe and the United States).

7. See Dame Mary Arden, *Time for an English Commercial Code?*, 56 CAMBRIDGE L.J. 516, 517 (1997) (providing a brief history of the origins of the American Law Institute and the UCC).

8. See William A. Schnader, *Why the Commercial Code Should Be "Uniform,"* 20 WASH. & LEE L. REV. 237, 238 (1963) (explaining the constitutional and practical limitations surrounding the adoption of uniform laws in the United States).

9. See E. Allan Farnsworth, *The Vienna Convention: History and Scope*, 18 INT'L LAW. 17, 17–19 (1985) (detailing the origins of the CISG).

10. See *id.* at 17–18.

11. See Schnader, *supra* note 8, at 238.

12. See Wang Jinggen & Larry A. DiMatteo, *Chinese Reception and Transplantation of Western Contract Law*, 34 BERKELEY J. INT'L L. 44, 46 (2016) (explaining the Western origins—which include

effectively adopted key structures and principles underlying the Vienna Convention.¹³ This means that, while China is a decidedly civil-law regime, its contract law reflects the law of commerce developed over centuries in the common law of the United States, England, and before that, the Law Merchant and the *ius commune* of continental Europe.¹⁴

This Article will argue that, while much of the convergence in commercial law between civil-law systems and common law regimes has been purposive and deliberate, the overwhelming movement towards convergence has not been so intentional. Instead, it is the natural progression towards efficient “shortcuts” to solving the common problems for which commercial law has been developed. Convergence, in other words, characterizes the movement to provide a better, more efficient product in “the market for law.”

Furthermore, technological advancements have accelerated this convergence. The invention of the computer and word processing have made possible the proliferation of “boilerplate,” namely, standard form contracts and standard contract clauses.¹⁵ Computer search engines have also made it possible, cheap, and even effortless for consumers and business people to carefully compare contract terms and wording between standard form contracts.¹⁶ At no time in history has the marginal consumer of contract prices, terms, and language been so empowered to compare and insist upon the prices and non-price terms he or she desires. As “smart contracts” provide parties and their transactions with the ability for self-enforcing terms and conditions, the law of contract is becoming increasingly “privatized.” Parties to an agreement can now not only insist upon the terms they desire but they can also actually determine—within limits—how those terms will be enforced. Smart contracts permit parties to enforce their own terms

the UCC—of Chinese contract law).

13. *Id.*

14. The *ius commune*, or the “common law of Europe,” was the general understanding of law that was spread across continental Europe after the reception of Roman law in the eleventh century. This occurred after the Code of Justinian was discovered in the libraries of Toledo and Cordoba during the *reconquista* of Spain. Lawyers and judges trained in Roman law in the newly-formed universities of Europe spread the same or “common” principles of law wherever they traveled to practice. See MARY ANN GLENDON ET AL., *COMPARATIVE LEGAL TRADITIONS IN A NUTSHELL* 28–34 (4th ed. 2015).

15. See MARGARET J. RADIN, *BOILERPLATE: THE FINE PRINT, VANISHING RIGHTS, AND THE RULE OF LAW* 12–15, 40 n.7 (2013) (implying that modern word processing technology has empowered contract drafters to produce increasingly complex standard form contracts).

16. See G. Marcus Cole, *Rational Consumer Ignorance: When and Why Consumers Should Agree to Form Contracts Without Even Reading Them*, 11 J.L. ECON. & POL’Y 413, 421 (2015) (arguing that the marginal consumer for each contract term will “police” the terms offered in standard form contracts by comparing forms).

themselves, without consulting governmental authorities, police, or courts.¹⁷ In a very real sense, “choice of law” is now migrating towards “choice of algorithm.”

In the market for contract law, the traditional suppliers of law—namely, states—are increasingly encountering stiff competition from a variety of sources. Competitors are no longer limited to competing jurisdictions. They now include computer programmers and “artificially intelligent” computers. Although states enjoy a competitive advantage in the form of a monopoly over the legitimized use of physical violence, states and market participants are becoming increasingly aware that violence is not the only way to enforce contracts. Engineers, programmers, coders, miners, and other tech-savvy entrepreneurs are devising new, cheaper, nonviolent, and “stateless” ways of enforcing bargains.

These alternatives are presenting consumers of contract law with more choices than ever before. Just as competition in other competitive markets leads to a convergence of price and quality of the underlying commodities bought and sold, the competition to capture the consumers of efficient contract law has led to a convergence of its content. In short, in the same way that commodities around the world obey “the law of one price,” efficient contract law around the world is beginning to obey “the law of one law.”¹⁸ Part I of this Article will describe “smart contracts” and blockchain technology. It will then explain the use of smart contracts in commercial transactions. This Part will then explain the three defining characteristics of smart contracts, namely, that they are “immutable,” “automated,” and “distributed.”¹⁹ It is these three characteristics that allow smart contracts on the blockchain to substitute for the function of courts and armed officers to enforce contracts.

Part II describes the market for commercial law and, in particular, the

17. See generally MAYUKH MUKHOPADHYAY, *ETHEREUM SMART CONTRACT DEVELOPMENT* (2018) (detailing extensively the various functions of smart contracts).

18. The “Law of One Price” (or “LOOP,” for short) is the economic principle that states that, in the absence of trade frictions like transportation costs or tariffs, a commodity traded in a competitive market bears the same price wherever it is bought or sold, anywhere in the world. See N. GREGORY MANKIW, *PRINCIPLES OF ECONOMICS* 686 (6th ed. 2012). The Law of One Price serves as the basis for the Theory of Purchasing Power Parity, namely, that a basket of commodity-goods should cost the same around the world but for the productivity of the country in which the purchase is made. See Dennis V. Kadochnikov, *Gustav Cassel’s Purchasing Power Parity Doctrine in the Context of His Views on International Economic Policy Coordination*, 20 EUR. J. HIST. ECON. THOUGHT 1101, 1111 (2013).

19. See generally Gareth W. Peters & Efstathios Panayi, *Understanding Modern Banking Ledgers Through Blockchain Technologies: Future of Transaction Processing and Smart Contracts on the Internet of Money*, in *BANKING BEYOND BANKS AND MONEY: A GUIDE TO BANKING IN THE TWENTY-FIRST CENTURY* 239 (Paolo Tasca et al. eds., 2016).

market for an efficient law of contracts. It will illustrate the historical market forces that have led suppliers of law—governments, the Catholic Church, medieval synagogues, as well as more modern private associations—to service this market with law as demanded by market participants themselves. These competitive forces, in turn, have led to the convergence we have witnessed and are currently witnessing. Part II will also trace the path of convergence in commercial law from the Law Merchant and Ecclesiastical Law through the common law and into the civil law systems of today. It will emphasize both the historical competition between law-providers, like the state and the Catholic Church, as well as modern jurisdictional competition between states in the market for law-provision. It will also point out how the purposive coordination between institutions has acted as “concrete blocks” dropped into a “sea” with the expectation that “coral reefs” of law will form around them.²⁰ In this way the codification movement, while a coordinated product of central planning, has resulted in further “spontaneously-ordered” law.²¹

Part III of this Article will assert that the convergence we are witnessing in contract law is the natural result of the increasing competitiveness in the market for the provision of contract law. It visits one of the fundamental concepts of price theory, namely, the phenomenon of price convergence. It extends price convergence to non-price characteristics to argue that the convergence we are witnessing in the market for contract law mirrors price convergence in commodities markets.

Part III also illustrates how state-provided contract law, in the form of the UCC, the CISG, and the New Contract Law of the People’s Republic of China, actually permits and invites customized contract law through the use of default and penalty-default rules. As already indicated, some of the convergence we witness today was conscious and deliberate, as when the New Contract Law of China imported the structure and content of the Vienna Convention.²² While adoption of these modern codes was largely driven by industry, the replication of the rules, and especially the internal structure of

20. See Learned Hand, Book Review, 35 HARV. L. REV. 479, 479 (1922) (reviewing BENJAMIN N. CARDOZO, *THE NATURE OF THE JUDICIAL PROCESS* (1921)) (describing the common law as “a monument slowly raised, like a coral reef, from the minute accretions of past individuals, of whom each built upon the relics which his predecessors left, and in his turn left a foundation upon which his successors might work”); see also G. Marcus Cole, *Shopping for Law in a Coasean Market*, 1 N.Y.U. J.L. & LIBERTY 111, 123 (2005) (characterizing the common law as a cumulative spontaneous order which grows over time by accretion).

21. See 1 F.A. HAYEK, *LAW, LEGISLATION & LIBERTY* 36–38 (1973) (describing the two sources of order as “planned” orders and “spontaneous” orders).

22. See Jingen & DiMatteo, *supra* note 12, at 46.

the codes themselves, were driven by jurisdictional competition. Much, if not most, of this convergence, however, has been privately driven. For example, parties around the world have employed choice of law clauses to funnel the commercial law of the State of New York into agreements having nothing else to do with New York, the United States, or even the common law.²³

Part IV will explore the broader convergence of commercial law in areas beyond the law of contracts. In particular, it will consider the effect that blockchain technology has had, and will continue to have, on the other Articles of the UCC beyond Article 2 contracts for the sale of goods. As technology is brought to bear on the central questions at the heart of commercial law, parties are increasingly empowered to provide their own solutions. This Part will show how commercial law is not only increasingly customized and privatized, but that it is also beginning to converge with its origins in the Law Merchant.²⁴

In other words, commercial law is about to come “full circle.”

I. THE MARKET FOR CONTRACT LAW

A. AN OLD COMPANY IN A NEW MARKET

Barclays is a bank. In fact, it is an iconic financial firm. Founded in 1690, it is the sixth oldest existing bank in the world and the second oldest English bank.²⁵ In addition to being old, Barclays is quite large. It operates branches in forty different countries and has over 120,000 employees. With €1.3 trillion in assets, it is Britain’s second largest bank and the sixth largest bank in Europe.²⁶ Because banks must satisfy regulators and concerns of investors and depositors, Barclays is, like most banks, very conservative.

Furthermore, Barclays is powerful. According to one study, Barclays is

23. See Gilles Cuniberti, *The International Market for Contracts: The Most Attractive Contract Laws*, 34 NW. J. INT’L L. & BUS. 455, 457 (2014) (presenting an empirical analysis of choice-of-law clauses that shows New York law dominates all others); Theodore Eisenberg & Geoffrey P. Miller, *The Flight to New York: An Empirical Study of Choice of Law and Choice of Forum Clauses in Publicly-Held Companies’ Contracts*, 30 CARDOZO L. REV. 1475, 1478 (2009); Geoffrey P. Miller & Theodore Eisenberg, *The Market for Contracts*, 30 CARDOZO L. REV. 2073, 2073 (2009).

24. See generally LEON E. TRAKMAN, *LAW MERCHANT: THE EVOLUTION OF COMMERCIAL LAW* (1983) (tracing the origins of modern commercial law to the Law Merchant of the Middle Ages).

25. The only existing British bank older than Barclays is C. Hoare & Co., founded in London in 1672. *7 Oldest Banks in the World*, OLDEST.ORG, <http://www.oldest.org/structures/banks> (last visited July 10, 2019).

26. JahanZaib Mehmood & Francis Garrido, *Data Dispatch EMEA: Europe’s Fifty Largest Banks by Assets*, S&P GLOBAL (April 16, 2018, 12:27 PM), <https://platform.mi.spglobal.com/web/client?auth=inherit#news/article?id=44033607&cid=A-44033607-14380>.

the most powerful transnational corporation in terms of ownership of global financial institutions.²⁷ As a result, Barclays exercises substantial corporate control and influence over global financial stability and market competition.²⁸

Despite being very old, very large, very English, very powerful, and very conservative, Barclays has developed a reputation for being among the first to spot key technological innovations in the marketplace. Barclays financed the world's first industrial steam railway.²⁹ Barclays also introduced the first credit card issued in the United Kingdom, the "Barclaycard," on June 29, 1966.³⁰ The first cash machine (now known as an "automatic teller machine" or "ATM") ever deployed anywhere in the world was installed by Barclays at one of its branches in Enfield, north of London, in 1967.³¹ In short, Barclays has long been a leader in innovation and financial technology or "FinTech."³²

So, it should come as no surprise that Barclays has become a leader in the world of "smart contracts." In 2016, Barclays initiated a pilot program to standardize derivatives transactions between banks on a "smart contracts" platform.³³ A derivative is essentially a trading contract between two or more parties that can take many forms and is based on an underlying asset.³⁴ Using blockchain technology, Barclays could engage in self-enforcing derivatives transactions with other financial institutions employing the same smart

27. Stefania Vitali et al., *The Network of Global Corporate Control*, PLOS ONE (Oct. 26, 2011), <https://doi.org/10.1371/journal.pone.0025995>.

28. *Id.*

29. Press Release, *All Aboard With Barclays' New £500m Fund for Northern SMEs*, BARCLAYS (May 31, 2018, 4:00 PM), https://home.barclays/news/2018/05/thornton/#back=%2Fcontent%2Fhome-barclays%2Fen%2Fhome%2Fresults.html%3Fq%3Dlaunches%2Bmajor%2Bnorthern%2Bpowerhouse%2Bboat%26_charset_%3DUTF-8%26offset%3D0%26origin%3Dhelp.barclays.co.uk ("Barclays has been helping businesses across the North to succeed since the dawn of the Industrial Revolution . . . , when we financed the world's first steam locomotive passenger railway between Stockton and Darlington." (quoting Barclays CEO, Jes Staley)).

30. Rupert Jones, *Put It on the Plastic: Barclaycard, the UK's First Credit Card, Turns Fifty*, THE GUARDIAN (June 29, 2016, 12:58 PM), <https://www.theguardian.com/money/2016/jun/29/put-it-plastic-barclaycard-uk-first-credit-card-50-1966>.

31. Brian Milligan, *The Man Who Invented the Cash Machine*, BBC NEWS (June 25, 2007, 5:35 AM), <http://news.bbc.co.uk/2/hi/6230194.stm>.

32. Barclays technology archive blog is worth a read, available at *Technology*, BARCLAYS: GROUP ARCHIVES, <https://www.archive.barclays.com/items/show/5412> (last visited July 20, 2019).

33. Ian Allison, *Barclays' Smart Contract Templates Stars in First Ever Public Demo of R3's Corda Platform*, INT'L. BUS. TIMES, <https://www.ibtimes.co.uk/barclays-smart-contract-templates-heralds-first-ever-public-demo-r3s-corda-platform-1555329> (last updated July 11, 2016, 11:44 AM).

34. See James Chen, *Derivative*, INVESTOPEDIA, <https://www.investopedia.com/terms/d/derivative.asp> (last updated May 19, 2019); *Definition of A Derivative*, ECON. TIMES, <https://economic.times.indiatimes.com/definition/derivatives> (last visited May 10, 2019).

contract platform to complete the transactions without the intervention of lawyers, courts, or law enforcement officers.³⁵

In 2017, the International Swaps and Derivatives Association (the “ISDA”) issued a whitepaper entitled *Smart Contracts and Distributed Ledger – A Legal Perspective*.³⁶ In it, the ISDA called for standardized smart contract templates and distributed ledger platforms for all financial institutions participating in such trades.³⁷ Known as the “Common Domain Model” (the “CDM”), it would reduce the time associated with drafting and implementing derivative and swap agreements and their associated disclosures from approximately twenty days to about four hours.³⁸ Barclays is leading the effort to employ the CDM by drafting and promulgating standard form smart contracts to dramatically increase the efficiency of derivative finance.³⁹ Barclays is also exploring ways to expand the use of smart contracts to other financial services.⁴⁰ It is true that even standard derivative contracts require extensive paperwork.⁴¹ This paperwork, however, is largely required by financial regulators and not by the transactions or transactors themselves.⁴²

In short, one of the oldest, largest, most venerable, most regulated, and, therefore, most conservative companies on the planet has adopted smart contracts and blockchain technology to pursue one of its core business lines. Today, transactions in the form of smart contracts already number in the hundreds of millions.⁴³ The Ethereum platform, one of the many platforms for the development of smart contracts, has already processed over one trillion dollars in smart contract transactions, averaging over \$2 billion per day.⁴⁴ Like ATMs, smart contracts are suddenly “mainstream.”

35. Arjun Kharpal, *Barclays Used Blockchain Tech to Trade Derivatives*, CNBC (Apr. 19, 2016, 6:37 AM), <https://www.cnbc.com/2016/04/19/barclays-used-blockchain-tech-to-trade-derivatives.html>.

36. ISDA & LINKLATERS, WHITEPAPER: SMART CONTRACTS AND DISTRIBUTED LEDGER – A LEGAL PERSPECTIVE (2017), <https://www.isda.org/a/6EKDE/smart-contracts-and-distributed-ledger-a-legal-perspective.pdf>.

37. *Id.* at 3, 19–20.

38. *See From Concept to Reality*, ISDA Q., Aug. 2018, at 33, 33–34.

39. *See* Ketaki Dixit, *Barclays Uses ISDA Standard for Blockchain Derivatives*, AMBCRYPTO (Apr. 27, 2018), <https://ambcrypto.com/barclays-uses-isda-standard-for-blockchain-derivatives>.

40. *Id.*

41. *See Derivative Contracts Sample Clauses*, LAW INSIDER, <https://www.lawinsider.com/clause/derivative-contracts> (last visited July 20, 2019) (providing various standard form terms for derivative contracts).

42. *See* Dixit, *supra* note 39.

43. *See What 29,985,328 Transactions Say About the State of Smart Contracts on Ethereum*, MEDIUM (Oct. 28, 2018) [hereinafter *29,985,328 Transactions*], <https://blog.sfox.com/what-29-985-328-transactions-say-about-the-state-of-smart-contracts-on-ethereum-2ebdba4bea1c>.

44. *Ethereum Transacting \$166 Million Per Hour, 53% to Smart Contract Dapps*, TRUSTNODES

B. WHAT IS A “SMART CONTRACT?”

As smart contracts are increasingly employed to substitute, or supplement, traditional contracts, it is important to know two things about them. First, it is important to have an understanding of what smart contracts are. Second, it is important to know what a smart contract can and cannot do.

A “smart contract” is a piece of executable computer code that stores rules of a transaction and automatically verifies the fulfillment of those rules on a network of computers which execute the contract logic.⁴⁵ To substitute for traditional legal enforcement, most smart contracts rely upon blockchain technology.⁴⁶ Blockchain technology enables businesses to build self-executing agreements, allowing them to electronically program a contract to execute a transaction or payment only when the conditions of that business’s contract have been met.⁴⁷ Smart contracts are written in several high-level programming languages and are most often used to implement a contract between two parties where the execution is guaranteed by each node on the network.⁴⁸ This allows enterprises to transact directly with each other on private blockchains, using select terms and agreements, without having to utilize a third party—or courts of law—for enforcement.⁴⁹

The key characteristics of smart contracts are that they are:

Immutable. Thanks to the blockchain, smart contracts can never be changed or altered unless agreed upon by the proper parties.⁵⁰ Furthermore, the contracts are visible to the entire blockchain network. No one can break or change the contract without permission, because any change would require changes to all other blocks in the sequence. And since the blockchain is continuously being built, changes or “hacks” become increasingly difficult with each additional block.⁵¹ This builds trust and reduces opportunities for

(May 6, 2018, 1:06 PM), <https://www.trustnodes.com/2018/05/06/ethereum-transacting-166-million-per-hour-53-smart-contract-dapps>.

45. See Max Raskin, *The Law and Legality of Smart Contracts*, 1 GEO. L. TECH. REV. 305, 309 (2017) (“A smart contract is an agreement whose execution is automated.”).

46. Tsui S. Ng, *Blockchain and Beyond: Smart Contracts*, AM. B. ASS’N. (Sept. 28, 2017), https://www.americanbar.org/groups/business_law/publications/blt/2017/09/09_ng.

47. Raskin, *supra* note 45, at 310.

48. See Jason Wong, *The 6 Most Common Blockchain Programming Languages*, VERY POSSIBLE (Aug. 14, 2018), <https://www.verypossible.com/blog/the-6-most-common-blockchain-programming-languages>.

49. See Raskin, *supra* note 45, at 333.

50. Ng, *supra* note 46.

51. ROBERT VAN MÖLKEN, BLOCKCHAIN ACROSS ORACLE 144 (2019) (explaining that “one of the advantages of a public blockchain is immutability . . . ,” which “has the same effect on smart contracts”); Thomas J. Rush, *Smart Contracts Are Immutable—That’s Amazing...and It Sucks*, MEDIUM (May 13, 2016), <https://medium.com/@tjayrush/smart-contracts-are-immutable-thats-amazing-and-it>.

fraud.⁵²

Automated. By eliminating the intermediaries required to validate a typical business contract, businesses running private enterprise blockchains can process and settle more transactions than traditional exchanges.⁵³ In other words, smart contracts are automated.

Distributed. In order for the smart contract to be validated, every member of the network has to agree as to the terms of the transaction and that the called-upon performance has been rendered.⁵⁴ This means that funds are always released when—and only when—the terms of a contract are met.⁵⁵

By using blockchain technology, then, the parties to a smart contract are without the need for governmental institutions to enforce their terms. Smart contracts are said to be self-enforcing because satisfaction of the required performance triggers the counterparty's performance automatically. We can think of a smart contract as a type of "electronic escrow," but without a human escrow agent.⁵⁶

The existence of self-executing agreements does not, in itself, suggest that there is no role at all for governmentally-based law enforcement. The law of property, for example, undergirds the resultant product of electronic assets transformed into tangible ones. Nevertheless, even the law of property has substitutes made possible by blockchain technology, since cryptocurrency assets can be kept under lock and key through digital cryptography.⁵⁷ In fact, of the ten most transacted smart contracts, four

sucks-e0fbc7b0ec16; Marcin Zduniak, *Blockchain Immutability: Behind Smart Contracts*, ESPEO BLOCKCHAIN: BLOG (May 29, 2018), <https://espeoblockchain.com/blog/ethereum-smart-contract>.

52. See Loi Luu et al., *Making Smart Contracts Smarter*, PROC. 2016 ACM SIGSAC CONF. COMPUTER & COMM. SEC. 254, 255 (2016), <https://loiluu.com/papers/oyente.pdf> ("In contrast to distributed applications that can be patched when bugs are detected, smart contracts are irreversible and immutable.").

53. See Lin William Cong & Zhiguo He, *Blockchain Disruptions and Smart Contracts* 9 (Nat'l Bureau of Econ. Research, Working Paper No. 24399, Apr. 2018), <https://www.nber.org/papers/w24399>.

54. DELOITTE, IMPACTS OF THE BLOCKCHAIN ON FUND DISTRIBUTION 6–8 (2018), https://www2.deloitte.com/content/dam/Deloitte/lu/Documents/technology/lu_impact-blockchain-fund-distribution.pdf; Mayank Pratap, *Everything You Need to Know About Smart Contracts: A Beginner's Guide*, HACKERNOON (Aug. 27, 2018), <https://hackernoon.com/everything-you-need-to-know-about-smart-contracts-a-beginners-guide-c13cc138378a>.

55. See *What is an Enterprise Blockchain Smart Contract?*, BLOCKAPPS (July 30, 2018), <https://blockapps.net/enterprise-blockchain-smart-contract>.

56. See Jackson Ng, *Escrow Service as a Smart Contract: The Business Logic*, MEDIUM: COINMONKS (May 19, 2018), <https://medium.com/coinmonks/escrow-service-as-a-smart-contract-the-business-logic-5b678ebe1955> (explaining how smart contracts operate to replace escrow agents in transactions that previously required them).

57. See, e.g., NIELS FERGUSON ET AL., CRYPTOGRAPHY ENGINEERING: DESIGN PRINCIPLES AND

represent the issuance of securities or shares in companies through what have come to be known as initial coin offerings (“ICOs”).⁵⁸ An ICO is the blockchain equivalent of an initial public offering (“IPO”), except that, instead of shares of stock in the listed company, investors receive tokens—assets representing a share of the issuing company—that have value because of the self-executing code built into the ICO smart contract.⁵⁹ When the issuing company hits the encoded benchmarks or performance targets, the ICO smart contract triggers payment on the tokens.⁶⁰ Like shares of stock, tokens can be traded on exchanges, or bought back by the issuing company.⁶¹ Even these secondary transactions are typically governed by and executed through subsequent smart contracts.⁶²

In sum, smart contracts are self-executing computer codes, set in motion by parties to a transaction which is witnessed and validated by third parties at nodes on a blockchain network. If one party to the transaction performs its duties required under the contract, the performance is observed and validated by third parties, which then triggers the counterparty’s performance (payment) automatically. If, however, the first party fails to perform as called for in the agreement, this breach will likewise be observed by third parties to the transaction, and payment by the counterparty will be blocked. This all occurs without the guns, gunpowder, bullets, and threat of physical violence that is the essential characteristic of traditional governmentally-enforced law.⁶³

II. COMPETITION IN THE MARKET TO SUPPLY CONTRACT LAW

A. THE HISTORY OF COMPETITION IN THE MARKET FOR CONTRACT LAW

Smart contracts are just the latest competitor to state-provided contract law. This competition is nothing new. In his recent book, *The Dignity of Commerce*, contract scholar Nathan Oman traces the origins of modern

PRACTICAL APPLICATIONS 4 (2010) (explaining the “lock” and “key” operation of public key and private key cryptography).

58. See 29,985,328 *Transactions*, *supra* note 43.

59. See ANDREW ROMANS, MASTERS OF BLOCKCHAIN AND INITIAL COIN OFFERINGS 4 (2018) (describing ICOs as investment vehicles comparable to IPOs).

60. *Id.*

61. *Id.*

62. *Id.*

63. See Christoph Menke, *Law and Violence*, 22 LAW & LITERATURE 1, 1 (2010) (“Law is itself a kind of violence . . .”); see also Stephen L. Carter, *Law Puts Us All in Same Danger As Eric Garner*, BLOOMBERG (Dec. 4, 2014, 7:56 AM), <https://www.bloomberg.com/opinion/articles/2014-12-04/law-puts-us-all-in-same-danger-as-eric-garner> (“[T]he police go armed to enforce the will of the state, and if you resist, they might kill you.”).

contract law to the Elizabethan era and a court decision known as *Slade's Case* in 1603.⁶⁴ This is a common—but odd—choice of a starting point for a few reasons. First, the choice of *Slade's Case* as the birth of modern contract law treats the enforcement of informal promises, known as *assumpsit* at the time, as though it occurred to the Law Lords from a bolt of divine inspiration, entirely ignoring the historical and legal context which led to the *Slade's Case* decision. Second, and more importantly, to locate the enforcement of informal promises in the hands of Royal Courts of the Strand in London is to look at it through the distinctly twenty-first century perspective of state-created law. In other words, Oman sees *Slade's Case* as the beginning, because he, and other modern contract scholars like him, cannot contemplate that modern contract law and its enforcement might have originated outside of the institutions of the state.

In fact, it did.

Modern contract law is the product of competition between law providers in the market for law. The medieval common-law action of *assumpsit* arose at a time when plaintiffs had grown increasingly frustrated with the rigidities of the common law courts and its writ system.⁶⁵ Initially, in order to bring suit in the king's courts of law, a plaintiff needed to assert a cause of action.⁶⁶ This phrase was the shorthand that evolved from the understanding that the king had a monopoly on the legitimized use of physical violence, and if one wanted him to exercise violence on one's behalf, a plaintiff would have to show just cause as to why the king should take such action.⁶⁷

The original causes of action reflected the principle concern of the Norman kings, namely, the quiet enjoyment of profits from their lands.⁶⁸

64. NATHAN B. OMAN, *THE DIGNITY OF COMMERCE: MARKETS AND THE MORAL FOUNDATIONS OF CONTRACT LAW* 6 (2016) (describing John Slade's case against Humphrey Morley before the Devon Assizes as the origin of modern contract law).

65. See, e.g., JULIA RUDOLPH, *COMMON LAW AND ENLIGHTENMENT IN ENGLAND, 1689–1750*, at 130 (2013) (“Over time a body of equity law developed in English Chancery, providing new kinds of remedies where the rigidity of common law—with its closed system of Latin writs and formalized pleading in law French—meant that either that new problems could not be dealt with at common law, or that the common law would produce an unjust result.”); see also E. ALLAN FARNSWORTH, *CONTRACTS* 12–18 (4th ed. 2004) (describing the evolution of the action of *assumpsit* from the common law tort writ of trespass).

66. See FARNSWORTH, *supra* note 65, at 12.

67. See A.W. BRIAN SIMPSON, *A HISTORY OF THE COMMON LAW OF CONTRACT: THE RISE OF THE ACTION OF ASSUMPSIT 199–202* (Clarendon Press 1987) (describing the meaning of the phrase “cause of action”).

68. See GEORGE W. KEETON, *THE NORMAN CONQUEST AND THE COMMON LAW* 91–92 (Barnes & Noble 1966) (quoting F. W. Maitland's claim that, “[i]f English history is to be understood, the law of

After William the Conqueror saw victory at the Battle of Hastings, he ordered that all of his newly acquired lands be recorded.⁶⁹ The *Domesday Book* became the first land title recording system in the Western world in 1086, just twenty years after the Norman conquest.⁷⁰

In keeping with this obsession with land and the wealth it generated, the earliest actions in the king's courts were actions involving land. As Theodore Frank Thomas Plucknett put it in *A Concise History of the Common Law*:

Of these civil pleas, then, those which first received the attention of the King's Court were pleas of land. Reasons of state demanded that the Crown through its court should have a firm control of the land; the common law, therefore, was first the law of land before it could become the law of *the* land.⁷¹

The purpose and function of these writs in the Norman courts are obvious; if someone was improperly in possession of land, such possession interfered with the wealth-generating ability of the rightful holder, who could then no longer support the king with taxes.⁷² The writ of trespass was clearly a "just cause as to why the king should take such action."

Trespass was soon expanded because it became apparent that the wealth-generating capacity of land could be interfered with by more than just the wrongful taking of possession. If an ox and cart were necessary to till the soil, and if an interloper destroyed or disabled the rightful holder's ox and cart, then tax revenue would be lost once again. So, the writ of trespass was further expanded to an additional writ, namely, the writ of trespass-on-the-case.⁷³

After the initial actions in trespass and trespass-on-the-case were expanded to entertain complaints of injuries not rooted in real property, three promise-based writs emerged, namely, the writs of debt, detinue, and

Domesday Book must be understood").

69. *Id.* at 91.

70. See MAURICE KEEN, *THE PENGUIN HISTORY OF MEDIEVAL EUROPE* 107 (Penguin Books 1991) ("Norman direction, working within Anglo-Saxon traditions of local administration, had produced in Domesday Book the most complete survey ever made of the resources in men and wealth of a medieval kingdom.").

71. THEODORE FRANK THOMAS PLUCKNETT, *A CONCISE HISTORY OF THE COMMON LAW* 355 (Liberty Fund 5th ed. 2010) (emphasis in the original); see also J.H. Baker, *AN INTRODUCTION TO ENGLISH LEGAL HISTORY* 41 (4th ed. 2005) (describing the complex contortions engaged in by the king's courts in order to fit plaintiffs cases into the writ of trespass before other forms of action were developed). Technically, the writ of right was also contemporaneous with the writ of trespass and was an action to recover dispossessed land as opposed to land that was trespassed upon. See MARTIN SHAPIRO, *COURTS: A COMPARATIVE AND POLITICAL ANALYSIS* 81 (1981).

72. See S.F.C. MILSOM, *HISTORICAL FOUNDATIONS OF THE COMMON LAW* 22 (1969).

73. *Id.* at 256-61.

covenant.⁷⁴ The “just cause as to why the king should take such action” in these promise-based cases is less obvious. Still, if a land holder had arranged to have crops stored at harvest time, and the mill which promised to store the grain failed to make the space available, resulting in the loss of the grain, then the use of the land to generate wealth had gone to waste.⁷⁵ These three writs provided a remedy in such cases.⁷⁶

The writ of debt was the first of the three to emerge.⁷⁷ It allowed a plaintiff to bring an action rooted in the notion that if a defendant had borrowed money and failed to pay it back, then the plaintiff could petition the king’s courts to force the defendant to do so.⁷⁸ Soon, the king’s judges found it impossible to preclude similar treatment when a plaintiff’s chattels were borrowed and detained, like an unrepaid debt. The writ of detinue was born to address wrongful detention of such property.⁷⁹

In addition to these two types of writs, which dealt with physical property, in the form of money (*specie*) or chattels, that was improperly held by one who had promised to return them, a third writ arose. This writ involved a solemn, formal promise to do or sell something. Such promises, written out on parchment at a time when few could read or write, involved considerable time, thought, and resources. A scribe would be hired to write out the promises exchanged, and a wax seal was dripped onto the parchment.⁸⁰ For identification, one or both of the parties making the promise would impress the wax seal with his “signet” ring bearing his family crest and thereby assuring authenticity.⁸¹ This “signet-ure” provided yet another just cause as to why the king should take such action, namely, to

74. *Id.* at 211–13; *see also* S.J. STOLJAR, A HISTORY OF CONTRACT AT COMMON LAW 3 (1975) (tracing the origins of modern contract law to the original writs of debt, detinue, and covenant).

75. *See, e.g.*, *Nurse v. Barns* (1664) 83 Eng. Rep. 43 (KB) 43 (holding a mill owner liable for incidental damages suffered by a lessee of iron mills worth twenty pounds should be granted damages of five hundred pounds for stock purchased in reliance on the contract).

76. *See* STOLJAR, *supra* note 74, at 4–5.

77. *See* SIMPSON, *supra* note 67, at 203; *see also* CHRISTINE DESAN, MAKING MONEY: COIN, CURRENCY, AND THE COMING OF CAPITALISM 86 (2014) (“The ‘earliest writ of a contractual nature to be regularly issued,’ common law debt emerged in the 12th century.” (quoting SIMPSON, *supra* note 67, at 53–55)).

78. *See* DESAN, *supra* note 77, at 86.

79. *See* PLUCKNETT, *supra* note 71, at 400.

80. *Id.*

81. Signet rings “were used historically as a seal with a unique family crest to sign documents.” Charlie Gowins-Eglinton, *How Signet Rings Went from Traditional Family Heirloom to Modern Must-Have*, TELEGRAPH (Aug. 16, 2017, 6:45 AM), <https://www.telegraph.co.uk/fashion/style/signet-rings-went-traditional-heirloom-modern-must-have>; *see also* Christopher Austin, *A Brief History of Signet Rings*, HISTORY PRESS, <https://www.thehistorypress.co.uk/articles/a-brief-history-of-signet-rings> (last visited July 20, 2019).

avoid a breach of an oath taken before God.⁸² Accordingly, this third promissory writ came to be known as covenant.⁸³

While these extensions and additions to the original writ of trespass expanded the channels through which promises might be enforced, they remained so rigid that they put legal enforcement of promises out of the reach of all but a few. The principle mechanism for enforcing promises for those who could afford to resort to the courts was through an action in debt.⁸⁴ But the writ of debt was in itself a circuitous route to enforcement of a promise. The writ required the demonstration that a debt was owed by the defendant to the plaintiff.⁸⁵ This was accomplished through the use of a conditional bond.⁸⁶ When the original promise was made, the defendant also promised that if the promise was not performed, such lack of performance would give rise to a penal bond.⁸⁷ The penal bond was the debt that would serve as the basis for the writ.⁸⁸ In short, promises were not enforced directly; they were enforced indirectly, the breach of which served as the condition precedent for the owing of the penal bond.

The other avenue available to plaintiffs was an action in deceit.⁸⁹ This attenuated writ of trespass-on-the-case required a demonstration that the defendant had made a promise designed to induce the plaintiff to rely upon it.⁹⁰ The writ also required a showing that the promise was a false one, made so as to deceive the plaintiff to his detriment.⁹¹ This use of the action in deceit came to be known as *assumpsit*, for the enforcement of obligations freely assumed.⁹² By the late sixteenth century, actions in deceit had become a routine, if indirect, method for enforcing informal promises.⁹³

These indirect methods of promise enforcement did not arise in isolation. At the same time that the Royal Courts of Justice on the Strand in London were insisting upon the rigidities of the writ system, plaintiffs began to avail themselves of an alternative source of enforcement, namely, the Ecclesiastical Courts of the Roman Catholic Church, and later, the Church

82. See SIMPSON, *supra* note 67, at 203.

83. See PLUCKNETT, *supra* note 71, at 400.

84. See SIMPSON, *supra* note 67, at 203.

85. See SIMPSON, *supra* note 67, at 90.

86. *Id.*

87. *Id.*

88. *Id.*

89. *Id.* at 91.

90. *Id.*

91. *Id.*

92. *Id.*

93. *Id.*

of England.⁹⁴

The Church courts had long maintained jurisdiction over spiritual matters.⁹⁵ Although the Gallicanism movement sought to diminish the power of the Church relative to states throughout the Middle Ages, the Church succeeded in preserving its spiritual jurisdiction.⁹⁶ Accordingly, matters deemed spiritual—marriage, education, and clerical authority—were brought to them for resolution.⁹⁷ Soon, plaintiffs frustrated by the rigidities of the writ system began to realize that the breach of a promise could be viewed as more than just a civil wrong. Indeed, it could reveal something much deeper about the party in breach. A promise could be seen as a vow, and a vow as a type of oath. As famously noted in the historical fictional account of Saint Thomas More, *A Man for All Seasons*, “[w]hat is an oath then but words that we say to God?”⁹⁸

In other words, a breach of a promise could reveal a very serious sin. That sin came to be known as a “breach of faith,” an action available in the ecclesiastical courts.⁹⁹

The bishops and priests who heard these actions soon developed an appropriate remedy for plaintiffs bringing these cases.¹⁰⁰ If found guilty of a breach of faith, a defendant could be ordered to do penance. Penance, in the Middle Ages, would be unfamiliar to the faithful of the twentieth century. It often involved public displays of self-mutilation, flagellation, or other forms

94. See ROBERT B. EKELUND, JR. & ROBERT F. HÉBERT, *A HISTORY OF ECONOMIC THEORY AND METHOD* 56–58 (5th ed. 2007) (asserting that the effects of jurisdictional competition among courts of the Tudor and Elizabethan eras undermined the royal monopolies central to mercantilism).

95. Robert E. Rodes, Jr., *Secular Cases in the Church Courts: A Historical Survey*, 32 *CATH. LAW.* 301, 304 (1989) (explaining that “to get into church court all one had to do was to make the debtor pledge his faith as a Christian,” the breach of which was deemed “*fidei laesio*, breach of faith”).

96. Originating in France in the middle of the fourteenth century, Gallicanism was a movement seeking to wrest civil and religious authority away from the Pope in Rome towards local authorities. See generally JOTHAM PARSONS, *THE CHURCH IN THE REPUBLIC: GALLICANISM AND POLITICAL IDEOLOGY IN RENAISSANCE FRANCE* (2004). For a rich analysis of Gallicanism, see generally EMILE PERREAU-SAUSSINE, *CATHOLICISM AND DEMOCRACY: AN ESSAY IN THE HISTORY OF POLITICAL THOUGHT* (Richard Rex trans. 2012).

97. See GUY BEDOUELLE, *THE HISTORY OF THE CHURCH* 112–15 (2003) (describing the rise and fall of Gallicanism from the fifteenth through the eighteenth centuries).

98. ROBERT OXTON BOLT, *A MAN FOR ALL SEASONS*, act 2, sc. 3 (Sir Thomas More, explaining why he will not swear to the Act of Succession, concluding that “[w]hen a man takes an oath . . . he’s holding his own self in his own hands . . . [l]ike water”).

99. See HAROLD J. BERMAN, *LAW AND REVOLUTION: THE FORMATION OF THE WESTERN LEGAL TRADITION* 516 (1983) (“Canon Law claimed jurisdiction over . . . laity charged with sin and breach of faith . . .”).

100. See *HISTORICAL DICTIONARY OF LATE MEDIEVAL ENGLAND, 1272–1485*, at 112–14 (Ronald H. Fritze & William B. Robison eds., 2002).

of physical punishment. It was to be avoided at all costs.¹⁰¹

Fortunately, the clerics of the ecclesiastical courts made available to guilty defendants an alternative to public penance. For the right price, a penitent could purchase an indulgence.¹⁰² These documents declared that the Church had determined that the sin of the penitent had been “indulged” and therefore forgiven.¹⁰³ Early on, the fees for indulgences bore an uncanny resemblance to the harm claimed by the plaintiffs in breach of faith cases, with a slight “upcharge,” presumably for the costs of administration.¹⁰⁴ The fees were then paid to the plaintiffs who brought the breach of faith actions to make them whole for being so victimized by the sin of the defendants.¹⁰⁵

Soon, plaintiffs realized that the action in breach of faith was a more direct and affordable mechanism for enforcing promises. They fled in droves to the Church courts. The king’s courts of law, which were fiscally supported entirely by (and dependent upon) the fees generated from the cases brought, felt the sting of this competition.¹⁰⁶ By 1596, when John Slade brought his case against Humphrey Morley, the writing was on the wall.¹⁰⁷ The decision to recognize the action in *assumpsit* without the filing of a writ of debt was necessary to the survival of the courts of law. In other words, the recognition and creation of the action in *assumpsit*, the result of *Slade’s Case*, was little more than a competitive response to the market movement toward the

101. See MARY C. MOORMAN, *INDULGENCES: LUTHER, CATHOLICISM, AND THE IMPUTATION OF MERIT* (2017) (ebook) (noting that St. Thomas Aquinas reasoned that the authority granted by Christ to Peter to bind and loose supported the Church’s extension of indulgences, since “whatever remission is granted in the court of the Church holds good in the court of God” (citation omitted)).

102. See 4 SIR WILLIAM BLACKSTONE, *COMMENTARIES ON THE LAWS OF ENGLAND* 106 (11th ed. 1791) (condemning a Catholic Church for, in the pursuit of money and power, creating “[n]ew-fangled offences” and selling “indulgences . . . to the wealthy” while also “injoin[ing] penance *pro salute animae*, and commut[ing] that penance for money”).

103. See R.N. SWANSON, *INDULGENCES IN LATE MEDIEVAL ENGLAND* 56 (2007) (“The power of the pardon rather than any other associations made these indulgences popular.”).

104. See R.N. SWANSON, *RELIGION AND DEVOTION IN EUROPE, C. 1215–C. 1515*, at 220 (1997). Swanson provides the following examples of fees paid for indulgences:

For the Jubilee of 1500 the collector [of money for the sale of indulgences], Jasper Ponce, set a sliding scale of charges varying with landed income or the value of moveable goods. For the landed, the costs ranged from £3. 6s. 8d. for incomes over £2000 [(this is an *enormous* income, that of a high baron)] down to 1s. 4d. for the £20–40 category; for the others from £2 for those with goods over £1,000 down to 1s. for those in the £20–200 group. People falling below £20 paid what they felt able to contribute out of devotion.

105. See Daniel Klerman, *Jurisdictional Competition and the Evolution of the Common Law*, 74 U. CHI. L. REV. 1179, 1179 (2007) (arguing that, since court fees were the source of revenue for the courts of England, and since plaintiffs chose the courts in which to file suit, “judges and their courts competed by making the law more favorable to plaintiffs”).

106. See Edward Peter Stringham & Todd J. Zywicki, *Rivalry and Superior Dispatch: An Analysis of Competing Courts in Medieval and Early Modern England*, 147 PUB. CHOICE 497, 498 (2011).

107. For this famous case, see generally *Slade’s Case* (1602) 76 Eng. Rep. 1074 (KB) [hereinafter *Slade’s Case*].

ecclesiastical courts.¹⁰⁸ The courts of law recognized informal promises because their chief competitor, the ecclesiastical courts, already did. Failure to enforce informal promises would mean an end to the courts of law themselves.¹⁰⁹

With the decision in *Slade's Case*, the state won back its market share.¹¹⁰ It further entrenched its market position by becoming a subsidized provider of law. While Tudor and Elizabethan courts relied on fees from litigants for support, modern courts of law are largely supported by taxpayers. So, unlike the church courts of the Middle Ages, competitors in the market of supplying contract law today must overcome a competitive cost advantage held by the state and its monopoly on the legitimized use of physical violence.¹¹¹ It is precisely this subsidy that makes it impossible for Oman and other contemporary contracts scholars to envision the supply of contract law as a market, let alone a competitive one.¹¹²

B. COMPETITION AT THE MARGINS IN THE MARKET FOR CONTRACT LAW

Until recently, such a competitive advantage seemed insurmountable, except in very narrow circumstances. Those circumstances exist at the margins, where the contracts to be enforced are either so small as to make even the subsidized enforcement untenable, or so large as to make enforcement by the state untrustworthy.

Examples of small contract enforcement are ubiquitous. They typically involve what have come to be called “micro-contracts”—agreements measured in pennies or very small dollar amounts.¹¹³ These kinds of

108. See Klerman, *supra* note 105, at 1181.

109. *Id.* at 1180 (quoting William M. Landes & Richard A. Posner, *Adjudication as a Private Good*, 8 J. LEGAL STUD. 235, 254–55 (1979)).

110. See *Slade's Case*, *supra* note 107.

111. The monopoly over the legitimate use of physical force or the “monopoly on violence” is a core concept of modern political theory and public law. It has its origins in Jean Brodin’s *Les Six Livres de la République*, published in 1576, and Thomas Hobbes’s *Leviathan*, published in 1651. For their respective works, see generally JEAN BODIN, *LES SIX LIVRES DE LA RÉPUBLIQUE* (Gérard Mairet ed., 1993) (1576); THOMAS HOBBS, *THE LEVIATHAN* (Prometheus Bks. 1988) (1651). It later formed the foundation of Max Weber’s definition of the state as any organization that succeeds in holding the exclusive right to use, threaten, or authorize physical force against residents of its territory. See generally MAX WEBER, *POLITICS AS A VOCATION* (1919), reprinted in MAX WEBER: *ESSAYS IN SOCIOLOGY* 77 (H.H. Gerth & C. Wright Mills eds., trans., 1946), <http://polisci2.ucsd.edu/foundation/documents/03Weber1918.pdf>.

112. In this context, contract law supplied by government can be said to be “subsidized” by taxpayers, since governmental institutions provide enforcement mechanisms (violence) not at the disposal of private means of enforcement. See Carter, *supra* note 63.

113. See generally Xiaoming Yang et al., *Micro-Innovation Strategy: The Case of WeChat*, 20 ASIAN CASE RES. J. 401 (2016) (detailing Tencent’s strategy of marketing low-cost consumer innovation

agreements typically involve self-enforcing mechanisms that are relatively inexpensive to deploy, particularly over millions or billions of transactions.¹¹⁴ The Chinese behemoth Tencent, the largest company in all of Asia by market capitalization and revenue, was founded as a start-up just a few short years ago in 1998.¹¹⁵ Its meteoric growth has been due, in large part, to its ingenious, scalable business model—the inspiration for its name.¹¹⁶ As described by one of Tencent’s five founders, billionaire Charles Chen, the company was designed to make as little as “ten cents per transaction, but with a billion customers making hundreds of ten cent transactions each.”¹¹⁷ As the largest producer of games in the world, the leading mobile communications application in the world (WeChat), and the second leading payment system in the world (WeChat Pay), Tencent has created an addictive environment deemed essential to life in the twenty-first century.¹¹⁸ Failure to comply with Tencent terms of use or to pay a bill on the system results in suspension or termination of service.¹¹⁹ No court costs are necessary when the product has its own enforcement mechanism.

Examples of contracts at the other end of the spectrum are not as numerous, but they exist nevertheless. The most commonly cited example is the enforcement of bargains within the New York diamond dealers association.¹²⁰ As University of Chicago Law School Professor Lisa Bernstein has documented, the diamond dealers have established their own

to China’s burgeoning population).

114. *Id.* at 403.

115. See Salvatore Cantale & Ivy Buche, *How Tencent Became the World’s Most Valuable Social Network Firm – with Barely Any Advertising*, THE CONVERSATION (Jan. 18, 2018, 2:10 PM), <http://theconversation.com/how-tencent-became-the-worlds-most-valuable-social-network-firm-with-barely-any-advertising-90334>.

116. Tencent’s growth has been attributed in large part to its ability to tap into four factors unique to China’s technology sector, namely, (1) scale, (2) openness (to private domestic entrepreneurship), (3) official support of local and central governments, and (4) technology. This combination of factors has been dubbed the SOOT model for growth by Edward Tse. See EDWARD TSE, CHINA’S DISRUPTORS 71, 83 (2015).

117. Interview with Charles Chen, Co-Founder, Tencent, at Stanford Law School (Apr. 20, 2014) (notes on file with author).

118. See Rayna Hollander, *WeChat Has Hit 1 Billion Monthly Users*, BUS. INSIDER (Mar. 6, 2018, 2:59 PM), <https://www.businessinsider.com/wechat-has-hit-1-billion-monthly-active-users-2018-3> (explaining that “[r]oughly 83% of all smartphone users in China use WeChat,” while penetration has reached 93% in Tier 1 cities).

119. See, e.g., QQ Number Service Terms of Use, QQ SECURITY CTR, https://aq.qq.com/en/appeal/en_appeal_safety (last visited Aug. 29, 2019) (detailing the appeals process for suspension of account service).

120. See Lisa Bernstein, *Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, 21 J. LEGAL STUD. 115, 115 (1992) (describing the private legal order and norms adopted by New York diamond merchants).

“extralegal” system for enforcement of contracts.¹²¹ Diamond dealers agree to settle their disputes regarding transactions with each other within their own private tribunals.¹²² The desire for continued, intergenerational participation in the diamond business motivates conformity to this agreement. Dealers who violate this system by bringing suit in state courts are effectively banished from further participation in the industry.¹²³ The diamond courts apply their own laws of contract and impose their own remedies and penalties.¹²⁴ For diamond dealers within a closed community such as theirs, the private system of enforcement is an effective competitor to the taxpayer-subsidized contract regime of the state.

Private contract enforcement systems are not, themselves, new. The system described by Bernstein mirrors the medieval trans-Mediterranean contract enforcement system uncovered by Stanford economist Avner Greif.¹²⁵ According to Greif, an effective and efficient system of contract enforcement emerged among a community of traders across the Maghreb in North Africa during the eleventh century.¹²⁶ Records discovered in a recovered genizah of a synagogue excavated in Cairo in the late nineteenth century document the details of a trans-Mediterranean network of traders and their agents, all of whom conducted trade across the Mediterranean world for over one hundred years.¹²⁷ The Maghribi merchants would engage agents to transport their wares across the Mediterranean to Europe, sell them, and return with the proceeds of the sale.¹²⁸ This system persisted because of enforcement of the agency contracts through a reputation mechanism and a network of synagogue-based tribunals.¹²⁹ If a trader-agent were to abscond with the proceeds of sale, the aggrieved merchant would bring his case before the Maghribi tribunal. An adjudication against the trader-agent would result in banishment from the trans-Mediterranean trade network.¹³⁰

This punishment was effective for two reasons. First, the network of synagogues across the Maghreb allowed for transmission of the news of the

121. *Id.*

122. *Id.* at 135.

123. *Id.*

124. *Id.* at 126.

125. See Avner Greif, *Reputation and Coalitions in Medieval Trade: Evidence on the Maghribi Traders*, 49 J. ECON. HIST. 857, 857 (1989) (describing the complex system of trust and reputational sanctions underlying trans-Mediterranean trade during the Middle Ages).

126. *Id.*

127. *Id.* at 861–63.

128. *Id.*

129. *Id.*

130. *Id.* at 870.

offending trader-agent and his description.¹³¹ Second, the trans-Mediterranean trade was so profitable that most trader-agents would not risk losing participation due to an adverse judgment in the tribunals.¹³² In fact, intergenerational continuation of the trade effectively curtailed “end-game” behavior of trader-agents, since most hoped to pass the business down to their children.¹³³

What is most important to remember about the trans-Mediterranean trade and contract enforcement within it is that *it was not, and could not be, provided by any state*.¹³⁴ No state controlled the Mediterranean during the eleventh century, and no governmental authority could be appealed to in order to gain effective enforcement of contracts. The law of the Maghribi traders was private and associational, enforced by reputation mechanisms and private sanctions.¹³⁵

In sum, the market for the provision of contract law has long been characterized by competition. This competition often came from non-state suppliers of contract law, chosen both *ex ante* (the Maghribi traders and diamond dealers) or *ex post* (the ecclesiastical courts and the action for breach of faith). As if this were not enough, states themselves competed—and continue to compete—in the market for the provision of contract law.

C. JURISDICTIONAL COMPETITION IN THE MARKET FOR CONTRACT LAW

As demonstrated above, there is increasing competition in the market for the supply of contract law. Although the market for the supply of contract law is not, as of yet, in a state of perfect competition, it is clear that it is trending in that direction. To be sure, the taxpayer-subsidized advantage of state providers of contract law tends to distort this competition, at least in the short run. Potential market participants are discouraged from market entry by the mere existence of the cost advantage afforded to the state. Even in the absence of competition between state and private providers of contract law, there has long been competition *between* state providers of contract law.¹³⁶ This jurisdictional competition has perhaps provided more momentum towards convergence in contract law than any technological advancement to

131. *Id.*

132. *Id.*

133. *See id.*

134. *Id.*

135. *Id.* at 874.

136. *See* Geoffrey P. Miller, *Choice of Law as a Precommitment Device*, in *THE FALL AND RISE OF FREEDOM OF CONTRACT* 357, 365 (F.H. Buckley ed., 1999) (asserting that jurisdictions compete knowing that parties are free to adopt their law within contractual choice of law and choice of forum provisions).

date.

There is ample evidence that, when the Founding Generation drafted the Constitution of the United States, they were intimately familiar with Adam Smith's arguments in favor of jurisdictional competition between courts systems, as well as the jurisdictional competition between the ecclesiastical courts and the law courts of the Tudor and Elizabethan eras.¹³⁷ Although constitutional historians and scholars generally agree that the Founders never clearly articulated a theory of jurisdictional competition during the convention or the debates leading up to it, it is nonetheless inescapable that they were familiar with the concept from English and continental law and history.¹³⁸ In fact, the structure of American federalism reflects the admiration and trust the Founders had for jurisdictional competition. This trust is evident in the Federalist Papers, as well as in the structure of the Constitution itself.¹³⁹

The Framers of the American Constitution demonstrated their admiration for jurisdictional competition by limiting the federal government's ability to encroach on common law causes of action. By establishing a government of limited, enumerated powers, the Founders left most of day-to-day jurisdictional authority to the states.¹⁴⁰ In fact, Hamilton and Madison characterized jurisdictional competition through federalism in *The Federalist Papers* "as a form of government that encourages two sovereigns to compete for the people's affection."¹⁴¹ In such a system, it would be necessary to have a capable judiciary to referee the inevitable disputes that would arise between these competitive sovereigns. Even before the powers of taxation and the military, the courts were the primary institution through which the authority of the state and national governments

137. See Samuel Fleischacker, *Adam Smith's Reception Among the American Founders, 1776–1790*, 59 WM. & MARY Q. 897, 897 (2002) ("[T]he American founders were among the earliest readers of [Adam] Smith's *Wealth of Nations*, and their readings constitute a significant episode in the history of the book's reception."); David Prindle, *The Invisible Hand of James Madison*, 15 CONST. POL. ECON. 223, 231 (2004) (tying Madison's exposure to Smith to his writings in *The Federalist Papers* and arguing that they reflect the influence of Smith's idea that "competition among self-interested individuals, groups, and institutions, if intelligently structured, can produce the public good").

138. See, e.g., MICHAEL S. GREVE, *THE UPSIDE DOWN CONSTITUTION* 134 (2012) (arguing that the legal and educational backgrounds of several of the Framers made exposure to the concept of jurisdictional competition inescapable).

139. See, e.g., Michael W. McConnell, *Federalism: Evaluating the Founders' Design*, 54 U. CHI. L. REV. 1484, 1505–06 (1987) (book review) (discussing the Founders' trust in jurisdictional competition through federalism to protect individual rights, such as freedom of religion).

140. Mark Moller, *The Checks and Balances of Forum Shopping*, 1 STAN. J. COMPLEX LITIG. 171, 186 (2012).

141. Todd E. Pettys, *Competing for the People's Affection: Federalism's Forgotten Marketplace*, 56 VAND. L. REV. 329, 352 (2003).

were made manifest in the early Republic. According to Hamilton, the courts were the medium through which the states and the federal government brought their agency to the people. Therefore, in Hamilton's view, the courts were the

most powerful, most universal and most attractive source of popular obedience and attachment. It is [the judicial branch,] which[,] . . . being the immediate and visible guardian of life and property[,] . . . contributes more than any other circumstance to impressing upon the minds of the people affection, esteem, and reverence towards the government.¹⁴²

This jurisdictional competition envisioned by the Founders has played out in the area of contract law. In fact, it played out so well that, throughout the nineteenth and early-twentieth centuries, neighboring states developed disparate laws of commerce.¹⁴³ As transportation technology improved, however, the wide range of commercial regimes across the United States proved problematic for the growth of interstate commerce.¹⁴⁴ It was in response to these differences in commercial laws from state to state that led business leaders to push for a uniform law of commerce.¹⁴⁵ The result was the UCC.¹⁴⁶

The UCC can be thought of as the product of the nineteenth-century movement to harmonize and make uniform the laws of the states. The UCC is a joint product of the American Law Institute (the "ALI"), a private non-profit group of law professors, practicing lawyers, and judges, and the National Conference of Commissioners on Uniform State Laws (the "NCCUSL").¹⁴⁷ It took ten years to draft the UCC and another fourteen years to see it adopted by the legislatures of every state except Louisiana, which still uses a version of the Napoleonic Code.¹⁴⁸ The end product was a type of "forced convergence" of the commercial law of the states. While there are minor differences in contract and commercial law across the United

142. THE FEDERALIST NO. 17, at 77 (Alexander Hamilton) (Terence Ball ed., 2003).

143. *The History of the UCC*, LEGALINC (May 9, 2018), <https://legalinc.com/blog/the-history-of-the-ucc>.

144. *Id.*

145. *Id.*

146. For a rich, authoritative history of the codification movement and the creation of uniform codes in the United States, see generally ROBERT A. STEIN, FORMING A MORE PERFECT UNION: A HISTORY OF THE UNIFORM LAWS COMMISSION (2013).

147. The NCCUSL, also known as the Uniform Laws Commission, was formed in 1892. *About Us*, UNIFORM L. COMMISSION, <https://www.uniformlaws.org/aboutulc/overview> (last visited July 21, 2019).

148. For more on the Louisiana system, see Daniel Engber, *Louisiana's Napoleon Complex*, SLATE (Sept. 12, 2005, 6:59 PM), <https://slate.com/news-and-politics/2005/09/is-louisiana-under-napoleonic-law.html> ("[L]aws governing commercial transactions in Louisiana come from the French system, putting them at odds with the parts of the Uniform Commercial Code used by other states.").

States today, these are largely a product of differing court interpretations and applications of the UCC.¹⁴⁹

Despite this forced convergence imposed upon the states by the UCC, the law of contracts has not stood still. Both jurisdictional competition around the world and competition from technological change have shaken the market forces shaping contract law out of their centuries-long slumber.

III. THE MARKET FOR CONTRACT LAW IS CONVERGING

A. COMPETITIVE MARKETS TEND TOWARD CONVERGENCE

Given the historic and continued competition in the market for the provision of contract law, we should not be surprised that we are witnessing the convergence of it. After all, a fundamental precept of price theory is that competitive markets tend toward convergence.¹⁵⁰ To see why this is so, consider the following thought experiment. Assume that sellers *directly* decide both the price and the total quantity produced, and buyers respond by deciding how much to buy. This situation is asymmetric between buyers and sellers. Sellers are the ones taking action first—by changing price and quantity produced—and buyers respond to the sellers’ decisions. Despite this, none of the conclusions in our thought experiment hinge on this asymmetry.¹⁵¹

For simplicity, assume that both buyers and sellers are able to perceive shortages and gluts and adjust accordingly. In the real world, price fluctuations and increases in demand may be due to inflation or other factors, and this may lead to inappropriate adjustments.¹⁵² Nevertheless, even in the real world, with its deviations from perfect information, non-negligible transaction costs, and irrational or less-than-fully-rational behavior, there is a significant tendency to converge towards a market price.¹⁵³

149. See, e.g., *Brooks Cotton Co. v. Williams*, 381 S.W.3d 414, 427–28 (Tenn. Ct. App. 2012) (holding that whether a “farmer” is a “merchant” under the UCC depends upon the circumstances).

150. See Peter A. Diamond, *A Model of Price Adjustment*, 3 J. ECON. THEORY 156, 164–65 (1970) (demonstrating that as consumers and sellers in a competitive market encounter prices that are higher or lower than the equilibrium price for any good, they gain information that causes prices to converge to the competitive equilibrium price).

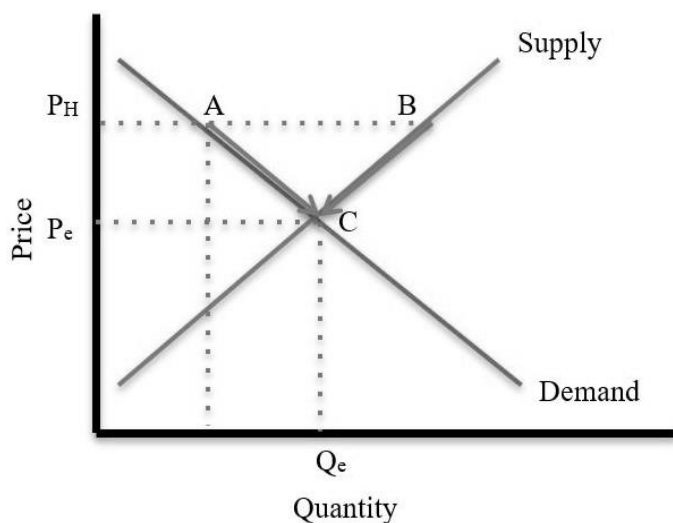
151. For experimental proof of this phenomenon, see generally Vernon L. Smith, *An Experimental Study of Competitive Market Behavior*, 70 J. POL. ECON. 111 (1962).

152. See JAN TUINSTRA, *PRICE DYNAMICS IN EQUILIBRIUM MODELS* 57–58 (2001) (demonstrating how asymmetric price adjustments work to achieve convergence toward market price equilibrium).

153. See FRANK M. MACHOVEC, *PERFECT COMPETITION AND THE TRANSFORMATION OF ECONOMICS* 21 (2003) (explaining that the tendency of markets toward equilibrium is “grounded in man’s success in discovering and overcoming his errors”).

When the price of a good exceeds the market price, supply exceeds demand. This is a situation of excess supply, or surplus. For instance, in Figure 1 the surplus is given by the length of the segment AB. A situation of surplus has the following effects:

FIGURE 1. Initial Price (P_H) Too High



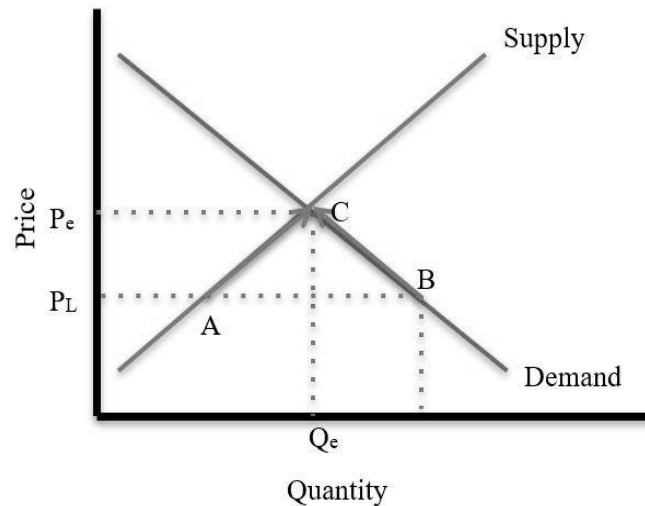
Sellers, experiencing unsold inventory, will tend to reduce the quantity supplied as well as reduce their price. In other words, they move downward and leftward along the supply curve. This may typically happen in two ways: sellers cut down their individual production, and some sellers go out of business.¹⁵⁴ As sellers lower their price, buyers become willing to buy more. In other words, buyers move downward and rightward along the demand curve.¹⁵⁵ This process is expected to continue until the price equals the market price (P_e), at which point the quantity demanded equals the quantity supplied.¹⁵⁶

When the price of a good is less than the market price, demand exceeds supply. This is a situation of excess demand, shortfall, or scarcity. For instance, in Figure 2, the shortfall (or scarcity) is the length of the segment AB. A situation of scarcity has the following effects:

154. See Diamond, *supra* note 150, at 163.

155. *Id.*

156. *Id.* at 164.

FIGURE 2. Initial Price (P_L) Too Low

Sellers, seeing the competition among buyers for the commodity, will tend to raise the price. Simultaneously, seeing the unmet demand, they will tend to increase the quantity produced. In other words, they move upward and rightward along the supply curve. This may typically happen in two ways: existing sellers will increase their individual production, and new sellers will enter the market.¹⁵⁷ As sellers increase their price, demand falls. In other words, buyers move upward and leftward along the demand curve.¹⁵⁸ This process is expected to continue until the price equals the market price (P_e), at which point demand equals supply.¹⁵⁹

In other words, in a market characterized by competition, the goods or services available for sale are subject to *price convergence*.¹⁶⁰ As the information about competitors and the prices of their products become known, market participants act to out-compete their competitors, whether they be suppliers or consumers.¹⁶¹ How rapidly convergence occurs depends on the amount of market information available to sellers and buyers, as well

157. *Id.* at 165.

158. *Id.*

159. *Id.*

160. See ISRAEL M. KIRZNER, *COMPETITION AND ENTREPRENEURSHIP* 219–22 (1973) (demonstrating how price convergence occurs in “a simple market for a single, undifferentiated product of standard quality” called “milk”).

161. *Id.* at 220.

as the frequency with which they interact and collect information.¹⁶²

B. CONTRACT LAW IS CONVERGING TOWARD “CUSTOMIZATION”

Like any market characterized by competition, the market for contract law is tending toward convergence. While perfectly competitive markets move toward price convergence relatively quickly, other markets, including the market for contract law, may move more slowly. This is because consumers often require more time, expertise, or intermediaries to become aware of disparities in non-price terms and to then act in a way that results in convergence.¹⁶³ In short, just as competitive markets result in price convergence over time, all competitive markets result in non-price convergence.

What exactly does non-price convergence mean? Price theory provides an implicit answer to this question. Since in a market that approaches perfect competition all goods are indistinguishable and suppliers are “price takers,” all characteristics of the goods in question, including all terms, must be the same.¹⁶⁴ In other words, in a competitive market in which suppliers are term and price takers, *all products by all suppliers will tend towards fungibility and substitutability on all margins.*¹⁶⁵

To see why this must be so, reconsider our thought experiment above. If, instead of prices, we use some non-price characteristic of the good, say, length, we can see that competitive markets respond in precisely the same way as they do when prices deviate from the competitive level. Sellers whose product is too long or too short will not sell as much as those whose product is the “right” length. Over time, competition will cause suppliers of the product to migrate toward the length that sells best. In other words, although convergence is most transparent on the margin of price, in a competitive market, all products converge to conform on all margins.¹⁶⁶

162. *Id.*

163. For an exploration into how banks price and control risks with non-price terms in private lending, see generally PHILIP E. STRAHAN, FED. RESERVE BANK OF N.Y., STAFF REPORT No. 90, BORROWER RISK AND THE PRICE AND NON-PRICE TERMS OF BANKS LOANS (1999), https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr90.pdf.

164. See PAUL KRUGMAN ET AL., ESSENTIALS OF ECONOMICS 198 (2d ed. 2007) (“In a perfectly competitive market, all market participants, both consumers and producers, are price-takers.”).

165. See FRED M. GOTTHIEL, PRINCIPLES OF MICROECONOMICS 240–41 (7th ed. 2013) (explaining how substitutability and fungibility of goods increases as markets move from monopolistic competition to perfect competition).

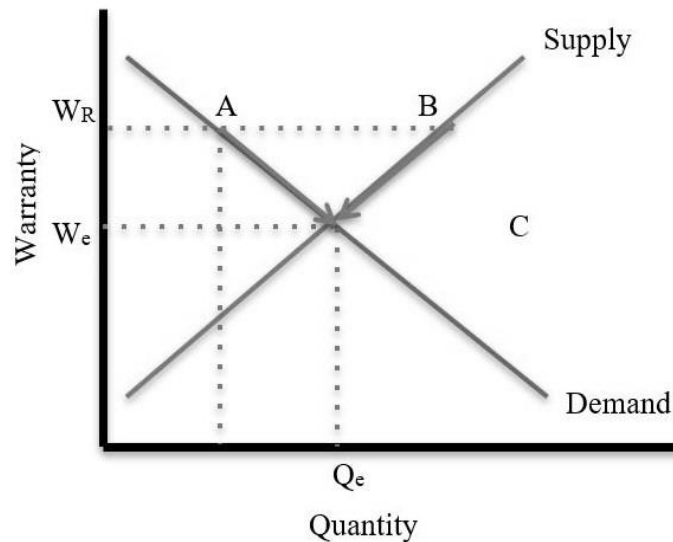
166. See GEORGE G. DJOLOV, THE ECONOMICS OF COMPETITION: THE RACE TO MONOPOLY 62–67 (Haworth Press 2006) (explaining how product differentiation creates barriers to, and a departure from, competitive markets).

Let us return once again to the examples used with Figures 1 and 2. But instead of prices that are too high or too low, let's think about a market involving warranty terms. If we are truly in a competitive market, *then all* terms of the contracts in the market—price, length, and warranty, for example—would converge toward each other.

We can demonstrate this with an example involving a warranty term that is too restrictive (meaning that if something goes wrong with the goods sold, the seller will, at best, refund only the purchase price). When the warranty for a good is *more restrictive* than the market warranty, supply exceeds demand. This is a situation of excess supply, or surplus. In Figure 3, the surplus is given by the length of the segment AB.

We can depict such a circumstance as follows:

FIGURE 3. Initial Warranty (W_R) Too Restrictive

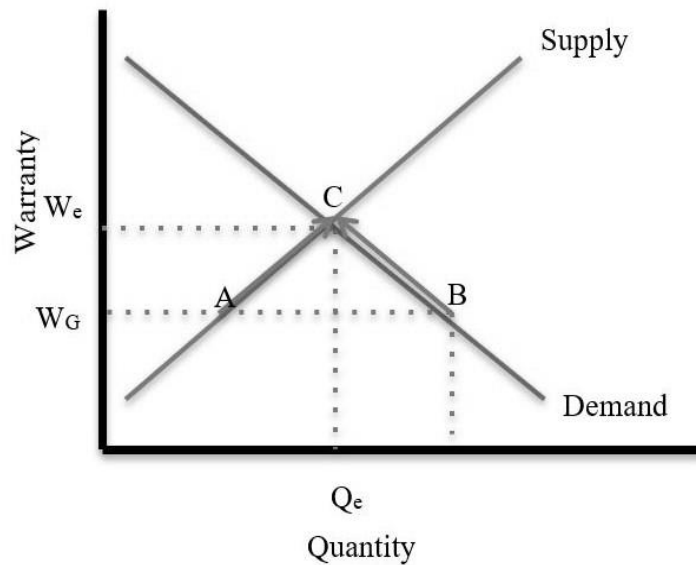


Sellers, experiencing unsold inventory, will tend to reduce the quantity supplied as well as reduce the restrictiveness (in other words, increase the generosity) of their warranty. In other words, they move downward and leftward along the supply curve. This may typically happen in two ways: sellers cut down their individual production, and some sellers go out of

business.¹⁶⁷ As sellers increase the generosity of their warranties, buyers become willing to buy more. In other words, buyers move downward and rightward along the demand curve.¹⁶⁸

On the other hand, when the warranty for a good is *more generous* than the market warranty, demand exceeds supply. This is a situation of excess demand, shortfall, or scarcity. For instance, in Figure 4, the shortfall (or, scarcity) is the length of the segment AB. A situation of scarcity has the following effects:

FIGURE 4. Initial Warranty (W_G) Too Generous



Sellers, seeing the competition among buyers for the commodity, will tend to make their warranty less generous (more restrictive). Simultaneously, seeing the unmet demand, they will tend to increase the quantity produced. In other words, they move upward and rightward along the supply curve. This may typically happen in two ways: existing sellers will increase their individual production, and new sellers will enter the market.¹⁶⁹ As sellers increase the restrictiveness of their warranties, demand falls. In other words,

167. See Diamond, *supra* note 150, at 165.

168. *Id.*

169. *Id.*

buyers move upward and leftward along the demand curve.¹⁷⁰ This process is expected to continue until the warranty term equals the market warranty term (W_e), at which point demand equals supply.¹⁷¹

In other words, in a market characterized by competition, the goods or services available for sale are subject to *term convergence in the same way that they are subject to price convergence*. As the information about competitors and the warranties for their products become known, market participants act to outcompete their competitors, whether they be suppliers or consumers.¹⁷² How rapidly convergence occurs depends on the amount of information available to sellers and buyers about their market, as well as the frequency with which they interact and collect information.¹⁷³

While it is not the case that the market for contract law is characterized by perfect competition, it is the case that the market for contract law is becoming increasingly competitive. If this is true, then it stands to reason that as the market for contract law becomes ever more competitive, the characteristics of contract law will converge upon an *equilibrium of contract law*. And since, to date, the process of creating and enforcing contracts has become ever more deferential to the will and needs of the transactors, the resultant convergence will be upon a form of law replete with humility. In short, contract law is becoming ever more “customized” or “bespoke.”

IV. “CUSTOM” CONTRACTING IN THE UCC, THE CISG, AND CHINA

A. THE HUMILITY OF THE UCC

If merchants were to design a code of law to promote trade while deferring to their own superior knowledge and experience, they could do worse than what they currently have with the UCC. In fact, it may be argued that merchants did, indirectly, have a hand in its design. The UCC is the product of a longstanding movement to codify commercial law.¹⁷⁴ But commercial law did not appear out of nowhere. Commercial law in the

170. *Id.*

171. *Id.*

172. See Israel M. Kirzner, *Entrepreneurial Discovery and the Competitive Market Process: An Austrian Approach*, 35 J. ECON. LITERATURE 60, 70 (1997).

173. See *id.* (explaining that the alert “entrepreneur discovers these earlier errors, buys where prices are ‘too low’ and sells where prices are ‘too high,’” such that “low prices are nudged higher, high prices are nudged lower; . . . [s]hortages are filled, surpluses are whittled away; [and] quantity gaps tend to be eliminated in the equilibrative direction”).

174. For the authoritative account of the codification movement, see generally STEIN, *supra* note 146.

United States has its origins in the common law of England, which drew its principles of commercial law from the Law Merchant.¹⁷⁵

The Chief Reporter of the UCC was Columbia University Law Professor Karl Llewelyn.¹⁷⁶ Professor Llewelyn was chosen by the commissioners by consensus.¹⁷⁷ He had a reputation for being a careful and widely respected scholar of commercial law. As one of the commissioners put it, Professor Llewelyn

insisted that the provisions of the Code should be drafted from the standpoint of what actually takes place from day to day in the commercial world rather than from the standpoint of what appeared in statutes and decisions.¹⁷⁸

In short, the UCC was designed to reflect the expectations of merchants, just as those expectations had been shaped by prior law and practice.

What shaped merchant expectations, however, were the already existing norms and rules associated with merchant law found both in the common law and its predecessor. The association of the common law to the Law Merchant is largely credited to one Scotsman, namely, William Murray, Lord Mansfield.¹⁷⁹ Lord Mansfield became Chief Judge of the Court of King's Bench in 1756.¹⁸⁰ Before Lord Mansfield, merchant issues were decided by judges "who thought in terms of haystacks and horses," and who conferred upon "the central area of commercial law for more than a century the flavour of land and manure rather than of commerce."¹⁸¹ Through Lord Mansfield, the "appropriate incorporation of the customs of merchants into the common law became an established fact."¹⁸²

As both the UCC and the common law incorporation of the Law Merchant look to the actual practices of merchants themselves, it is not a stretch to claim that both reflect a certain humility. Rather than impose the will and understandings of central planners upon merchant transactions, the

175. See TRAKMAN, *supra* note 24, at 7 ("Custom, not law, has been the fulcrum of commerce since the origin of exchange.")

176. See generally Arthur L. Corbin, *A Tribute to Karl Llewellyn*, 71 YALE L.J. 805 (1962) (expounding upon the life of Professor Llewellyn, including his service as Official Reporter of the UCC).

177. See William A. Schnader, *A Short History of the Preparation and Enactment of the Uniform Commercial Code*, 22 U. MIAMI L. REV. 1, 4 (1967) (describing the circumstances surrounding the appointment of Professor Llewellyn as Official Reporter).

178. *Id.*

179. See S. Todd Lowry, *Lord Mansfield and the Law Merchant: Law and Economics in the Eighteenth Century*, 7 J. ECON. ISSUES 605, 605-07 (1973).

180. *Id.* at 605.

181. *Id.* at 606 (citation omitted).

182. Frederick J. Moreau, *The Unwritten Law and Its Writers*, 2 PEPP. L. REV. 213, 242 (1975).

UCC—like the Law Merchant before it—constantly seeks to be informed by the customs and practices of the merchants themselves.

Nowhere does the UCC reflect this humility more than in the Article 2 provisions governing contracts for the sale of goods.¹⁸³ Various rules within Article 2 defer to “usage of trade” to determine unwritten or unspoken terms of an agreement.¹⁸⁴ When it comes to interpretation of open or ambiguous terms, the drafters of the UCC make this deference explicit. In Official Comment 1 to section 2-208, the drafters explain that the purpose of the statute is to discover what the parties themselves had in mind when they entered into their agreement.¹⁸⁵ According to Comment 1:

The parties themselves know best what they have meant by their words of agreement and their action under that agreement is the best indication of what that meaning was. This section thus rounds out the set of factors which determines the meaning of the “agreement” and therefore also of the “unless otherwise agreed” qualification to various provisions of this Article.¹⁸⁶

In other words, after centuries of crafting law to meet the needs of merchant commerce, the interpretive provisions of the UCC “tailor” the law to the specific understandings and meanings of the merchant parties to the transaction themselves. If the law can be said to be “tailored” to the customs, understandings, practices, and behavior of the parties, can “bespoke” law be far behind?

B. THE CONFORMITY OF THE CISG

The success of the UCC in the United States led multinational corporations around the world wanting more. Toward this end, a global push was initiated for the adoption of a body of international law that would do for global trade what the UCC had done for the American economy. That initiative resulted in the CISG in 1980, which came into effect in 1988.¹⁸⁷

The CISG is a uniform law governing the international sale of goods in much the same way that Article 2 of the UCC governs the sale of goods within the United States. It has been adopted by 89 states to date, albeit with the glaring absences of the United Kingdom, Hong Kong, and Taiwan.¹⁸⁸

183. The UCC is comprised of nine Articles, each with a focus on a particular area of commercial law.

184. U.C.C. § 2-208 (AM. LAW INST. & UNIF. LAW COMM'N, withdrawn 2001).

185. *See id.* § 2-208 cmt. 1.

186. *Id.*

187. *See* Farnsworth, *supra* note 9, at 17 (explaining the origins of the CISG).

188. For the complete list of signatories to the Vienna Convention, see *CISG: List of Contracting*

Although the United States was the eleventh country to accede to the terms of the CISG, it would be misleading to suggest that the “late” adoption by the United States reflects its lack of influence in the drafting of the convention. Nothing could be further from the truth.

The truth is that multinational corporations, most of which were based in the United States, pined for a uniform law governing the international sale of goods which would lower the costs of transactions in a way similar to that which occurred after the adoption of the UCC. In response to the demand for a uniform law of sales for international trade, the Vienna Convention adopted an approach that, for the most part, embraces the UCC.¹⁸⁹ Indeed, as one commercial law scholar put it, “one may view the Convention as a triumph of the [UCC]’s approach to contract law.”¹⁹⁰

To be sure, there are some differences between the CISG and the UCC. For example, the UCC incorporates a variant of the Statute of Frauds for the sale of goods over the statutory limit of \$500.¹⁹¹ Contracts involving goods valued beyond that amount must be evidenced by a signed writing or other documentary record.¹⁹² The CISG has no writing requirement resembling the Statute of Frauds and leaves the parties to prove the existence of a contract through witnesses or other evidence. Along the same lines, the UCC contains its own version of the parol evidence rule.¹⁹³ The UCC’s version of the rule, it’s other provisions, is very deferential to the specific understandings of the parties. It allows even “a final expression of their agreement” to “be explained or supplemented (a) by course of performance, course of dealing, or usage of trade (Section 1-303); and (b) by evidence of consistent additional terms unless the court finds the writing to have been intended also as a complete and exclusive statement of the terms of the agreement.”¹⁹⁴ The CISG has no similar parol evidence rule, and the United States Court of

States, INSTITUTE OF INT’L COMMERCIAL LAW, <https://iicl.law.pace.edu/cisg/page/cisg-list-contracting-states> (last visited July 22, 2019).

189. See Lyon L. Brinsmade, *American Bar Association Report to the House of Delegates*, 18 INT’L LAW. 39, 40 (1984) (“[M]any provisions of the Convention are very similar in content and form to those of the [UCC].”); Michael Kabik, *Through the Looking-Glass: International Trade in the “Wonderland” of the United Nations Convention on Contracts for the International Sale of Goods*, 9 INT’L TAX & BUS. LAW. 408, 428–29 (1992) (observing not only that “[m]any of the [CISG]’s provisions . . . similar in approach and content to those of the [UCC],” but also that “the [CISG] is, for the most part, truly a mirror image of the[UCC]”).

190. Robert S. Rendell, *The New U.N. Convention on International Sales Contracts: An Overview*, 15 BROOK. J. INT’L L. 23, 42 (1989).

191. U.C.C. § 2-201 (AM. LAW INST. & UNIF. LAW COMM’N 2018).

192. *Id.*

193. *Id.* § 2-202.

194. *Id.*

Appeals for the Eleventh Circuit has ruled that the parol evidence rule does not apply to contracts governed by the CISG.¹⁹⁵

Nevertheless, the CISG reflects the same deferential approach to contract formation and interpretation embodied in the UCC. Neither body of law has specific minimum requirements for contract formation, and both will find the existence of a contract where the actions of the parties demonstrate an understanding that a contract was formed.¹⁹⁶ In fact, the CISG is so deferential that it has been criticized for leaving too much to local interpretation.¹⁹⁷ Still, the CISG reflects a type of convergence, namely, the desire to tailor the law of commercial transactions to the needs and desires of merchants.

C. THE NEW CONTRACT LAW OF THE PEOPLE'S REPUBLIC OF CHINA

In 1999, the National People's Congress of the People's Republic of China enacted the New Contract Law (officially referred to as the "Uniform Contract Law") to take effect on October 1, 1999.¹⁹⁸ The purposes of the law were three-fold. First, the New Contract Law was designed to eliminate the inconsistencies that characterized the "three pillars" of contract law which preceded it.¹⁹⁹ Second, the New Contract Law was a required step in the full restoration of the contract law regime that existed prior to Mao Zedong's rule and the Cultural Revolution.²⁰⁰ This restoration was deemed a necessary prerequisite for China's membership in the World Trade Organization.²⁰¹

195. *MCC-Marble Ceramic Ctr. v. Ceramica Nuova D'Agostino, S.P.A.*, 114 F.3d 1384, 1388–89 (11th Cir. 1998); *CISG Advisory Council Opinion No. 3: Parol Evidence Rule, Plain Meaning Rule, Contractual Merger Clause and the CISG*, 17 PACE INT'L L. REV. 61, 61 (2005) ("The Parol Evidence Rule has not been incorporated into the CISG.").

196. See Aditi Ramesh et al., *CISG v. UCC: Key Distinctions and Applications*, 7 BUS. MGMT. REV. 459, 462 (2016).

197. See, e.g., Clayton P. Gillette & Robert E. Scott, *The Political Economy of International Sales Law*, 25 INT'L REV. L. & ECON. 446, 474 (2005) ("Uncertainty results not only from the many vague standards, but also from the use of ambiguous language that may have different meanings in different cultures.").

198. Feng Chen, *The New Era of Chinese Contract Law: History, Development, and a Comparative Analysis*, 27 BROOK. J. INT'L L. 153, 168 (2001).

199. See CHUAN FENG ET AL., CHINA'S CHANGING LEGAL SYSTEM 129–31 (2016) (explaining the history and operation of the "three pillars" system of Chinese contract law).

200. See Volker Behr, *Development of a New Legal System in the People's Republic of China*, 67 LA. L. REV. 1161, 1164 (2007) (stating that, under Mao's Cultural Revolution, "[c]ontracts were considered to be symbols of a capitalistic system; hence, the contract system was abolished").

201. Susan Ariel Aaronson, *Is China Killing the WTO?*, INT'L ECON., Winter 2010, at 40, 1 ("The rule of law was a key element of China's accession agreement because trade policymakers understood that how China was governed could distort trade in many of the sectors in which China competes."). In fact,

[t]he 2001 Protocol on the Accession of the People's Republic of China explicitly calls on

Third, and most importantly, the New Contract Law was designed to replicate the success of the more advanced economies found in the United States and Europe.²⁰² China was the ninth signatory to the CISG, and with ratification by the United States and Italy, the treaty came into force on January 1, 1988.²⁰³

The goal of the New Contract Law was simple, namely, to rebuild the legal infrastructure of an economy devastated by Mao Zedong's Cultural Revolution. In 1966, after a long series of failed communist "five-year-plans" that left China one of the poorest nations in the world, it became clear to Mao Zedong that forces had been arrayed to replace his leadership.²⁰⁴ In response, Mao initiated a purge of his political rivals. He employed the youth of the nation to root out more senior, established political leaders at the local, regional, and national levels.²⁰⁵ Mao designated this youth movement "the Red Guards," and they proceeded to dismantle what was left of Chinese civil society after the civil war and the failed five-year plan of the Great Leap Forward.²⁰⁶

Among the institutions purged by the Cultural Revolution, few were as decimated as the legal infrastructure of China. Mao closed all law schools, as well as courts and tribunals.²⁰⁷ Mao's Cultural Revolution jailed and executed countless judges and lawyers, and he declared that the Chinese

China to "apply and administer in a uniform, impartial, and reasonable manner all its laws, regulations and other measures of the central government as well as local regulations, rules and other measures . . . pertaining to or affecting trade . . . China shall establish a mechanism under which individuals and enterprises can bring to the attention of the national authorities cases of non-uniform application." It also calls on China to ensure that "those laws, regulations, and other measures pertaining to and affecting trade . . . shall be enforced."

Id. (ellipses in original) (quoting Ministerial Conference, *Protocol on the Accession of the People's Republic of China*, WTO Doc. WT/L/432 (Nov. 23, 2001)).

202. See Chen, *supra* note 198, at 155–68.

203. See Peter Winship, *An Introduction to the United Nations Sales Convention*, 43 CONSUMER FIN. L.Q. REP. 23 (1989), <https://www.cisg.law.pace.edu/cisg/biblio/winship2.html> ("In accordance with Article 99(1), the convention was to enter into force approximately one year after ten states had become Contracting States.").

204. See FRANK DIKÖTTER, MAO'S GREAT FAMINE: THE HISTORY OF CHINA'S MOST DEVASTATING DISASTER CATASTROPHE, 1958–1962, at 327 (2010) (describing the toll taken by Mao's economic failures).

205. See generally FRANK DIKÖTTER, THE CULTURAL REVOLUTION: A PEOPLE'S HISTORY, 1962–1976 (2016) (describing the internal power struggle after the failure of Mao's The Great Leap Forward).

206. See TANG TSOU, THE CULTURAL REVOLUTION AND POST-MAO REFORMS 73 (1986).

207. See Jerome A. Cohen, *A Looming Crisis for China's Legal System*, FOREIGN POL'Y (Feb. 22, 2016, 10:15 AM) <https://foreignpolicy.com/2016/02/22/a-looming-crisis-for-chinas-legal-system> ("[I]n 1972, there was virtually no legal education—because of the Cultural Revolution, universities were shuttered for a decade.").

people should “[d]epend on the rule of man, not the rule of law.”²⁰⁸ Furthermore,

the law and legal institutions were dismembered in a frenzy of hysterical fanaticism. Beginning in 1966, all law schools were closed. Attorneys, judges, courtroom personnel and law teachers were forced to work in the countryside The Red Guards . . . freely searched houses without legal process, arrested anyone, investigated anything, and sentenced, imprisoned, and frequently executed.²⁰⁹

As China crawled out from under the devastation of Mao’s Cultural Revolution, its new leadership sought a new direction. When Deng Xiaoping emerged triumphant after a power struggle with the “Gang of Four,” he sought to reestablish a functioning legal system.²¹⁰ Although his predecessor and Mao’s successor, Hua Guofeng, ordered the drafting of a new constitution and the reopening of China’s law schools in 1977, the reconstruction of the legal system took shape as one of the central components Deng’s vision for a prosperous China.²¹¹ Since the Cultural Revolution purged the country of trained lawyers and judges, a new judiciary was appointed from the ranks of military officers.²¹² These untrained judges and lawyers struggled to resolve cases when the nation was devoid of a system of laws.²¹³

Deng Xiaoping saw the rule of law as the common thread coursing through the developed economies of the world, and he wanted China to emulate their prosperity. Deng set upon a course to provide China with a coherent body of law, including commercial law, to pursue a brighter economic future.²¹⁴ First, he ordered the drafting of yet another constitution in 1982.²¹⁵ Second, he oversaw the development of a legal code designed to govern the commercial transactions that he hoped would follow.²¹⁶ Of these, three are of importance for our understanding of convergence in contract law.

208. SHAO-CHUAN LENG & HUNGDAH CHIU, *CRIMINAL JUSTICE IN POST-MAO CHINA* 18 (1985) (citation omitted).

209. RALPH H. FOLSOM & JOHN H. MINAN, *LAW IN THE PEOPLE’S REPUBLIC OF CHINA* 12 (1989).

210. William R. Baerg, *Judicial Institutionalization of the Revolution: The Legal Systems of the People’s Republic of China and the Republic of Cuba*, 15 *LOY. L.A. INT’L & COMP. L. REV.* 233, 242 (1992).

211. *Id.* at 243.

212. *Id.* at 244.

213. *Id.*

214. See Andrew Mayer, *The Rocky Road to Democracy: A Few Comments on Legal Development in China Since the Cultural Revolution*, 6 *CHINA L. REP.* 1, 2 (1989).

215. Baerg, *supra* note 210, at 243.

216. See Carlos W.H. Lo, *Deng Xiaoping’s Ideas on Law: China on the Threshold of a Legal Order*, 32 *ASIAN SURV.* 649, 650 (1992) (“For Deng after 1979, legal reform was the first step in restoring political order.”).

Prior to the enactment of the New Contract Law in 1999, contracts in China were governed by a set of three laws. Known as “the [T]hree [P]illars of Chinese Contract Law,” these were (1) the Economic Contract Law of 1981 (the “ECL”); (2) the Foreign Economic Contract Law of 1985 (the “FECL”); and (3) the Technology Contract Law of 1987 (the “TCL”).²¹⁷ The ECL was designed to solve the immediate need for a law to govern contracts between Chinese parties domestically.²¹⁸ The need was so urgent that it was promulgated while the newest constitution was still under consideration. As the Chinese economy grew during the 1980s, it became clear that the ECL might not be appropriate for contracts involving foreign direct investment. As a result, the National People’s Congress enacted the FECL to govern contracts between Chinese nationals and foreigners.²¹⁹ Later, as the national and strategic importance of technology and technology transfer became apparent, the National People’s Congress adopted the TCL to govern contracts in which the subject matter involved technology.²²⁰

The piecemeal nature of Chinese contract law, as contained in the Three Pillars, became problematic. Since each of the laws was promulgated at a different time by a different National People’s Congress, they reflected different and evolving understandings of the role of contract law within economic policy.²²¹ Furthermore, the fact that they were directed at different kinds of parties or contracts meant that they often contained gaps or conflicted with each other.²²² As China’s economy exploded with growth and complexity throughout the 1990s, the need for a comprehensive contract law gained urgency.²²³

The response to this pressure was the New Contract Law. When it took effect, it rendered the Three Pillars obsolete. To be sure, the New Contract Law is sweeping in scope, rolling in all of the subject matter from the prior three codes and expanding upon them to cover new ones.²²⁴ The New Contract Law is comprised of two main parts, namely, (1) general provisions

217. Nicole Kornet, *Contracting in China: Comparative Observations on Freedom of Contract, Contract Formation, Battle of Forms, and Standard Form Contracts*, 14 ELECTRONIC J. COMP. L., no. 1, 2010, at 1, 3.

218. *Id.*

219. *Id.*

220. *Id.*

221. See JIANFU CHEN, CHINESE LAW: CONTEXT AND TRANSFORMATION 583–84 (Rev. ed. 2015) (“Clearly the ‘Three Pillars’ system was a complicated one, fraught with many problems . . . [including] the lack and inconsistency of provisions on freedom of contracts . . .”).

222. See Kornet, *supra* note 217, at 4.

223. See CHEN, *supra* note 221, at 284.

224. *Id.*

and (2) specific provisions.²²⁵ As the name implies, the general provisions lay down rules of law applicable to all contracts in general. These include rules governing formation, interpretation, validity, assignment, breach, conditions, and choice of law.²²⁶ The specific provisions are comprised of fifteen chapters, each of which addresses the following subject matter areas: “sales, donation[s], lease[s], financial lease[s], [labor], supply of electricity, gas and water, loan[s], technology, storage, warehousing, carriage, construction . . . , commission, brokerage and intermediation.”²²⁷ In addition to its general and specific provisions, the New Contract Law is supplemented by the General Principles of Civil Law of 1986 (the “GPCL”).²²⁸ The GPCL contains general rules governing all civil-juristic acts that are applicable to contracts.²²⁹ Furthermore, there is a host of other laws that touch upon or affect contracts that come to bear on agreements in China, including consumer protection, advertising, insurance, and competition laws, to name just a few.²³⁰

What is most interesting about the New Contract Law is not just that it replaced and superseded the Three Pillars, but also that it has origins in the Law Merchant. China’s New Contract Law is arguably a direct descendant of the medieval *lex mercatoria*, or the Law Merchant. It can be so characterized because of the influence of the CISG in its formation, and, therefore indirectly, the UCC. Both the CISG and the UCC were contemplated by the drafters of the New Contract Law.²³¹ As a result, we should not be surprised that China’s New Contract Law reflects many of the characteristics of both the CISG and the UCC, including their deference to the knowledge and understandings of the parties to the contract.

China’s New Contract Law has been characterized as the beneficiary of “double transplantation.”²³² The first of these transplants came about when China acceded to the CISG.²³³ Doing so subjected Chinese companies engaged in international commercial transactions to a regime rooted in the deferential humility of the American UCC. The second transplant is subtler.

225. Kornet, *supra* note 217, at 4.

226. *Id.*

227. *Id.*

228. *Id.*

229. *Id.*

230. See Patricia Pattison & Daniel Herron, *The Mountains Are High and the Emperor Is Far Away: Sanctity of Contract in China*, 40 AM. BUS. L.J. 459, 470–71 (2003) (explaining the relationship between the New Contract Law and other laws of general application).

231. Chen, *supra* note 198, at 153–54.

232. Jingen & DiMatteo, *supra* note 12, at 52.

233. *Id.*

It can be said to have occurred in the actual drafting of the New Contract Law since the process and the substance of the comprehensive code tracked that of the CISG itself.²³⁴

The New Contract Law of China, however, is not a wholesale adoption of the CISG or the UCC. Indeed, it departs from these bodies of law in important ways. In fact, the most important departure may reflect the competitive nature of the market for the provision of contract law and the convergence resulting from this competition. The most distinguishing characteristic of the New Contract Law revolves around the remedy for breach. Unlike the CISG and the UCC before it, both of which provide the award of monetary damages as the presumptive form of relief, the New Contract Law actually awards specific performance as a matter of course.²³⁵

To be sure, specific performance was also the presumptive form of relief under the Three Pillars. In fact, the New Contract Law actually relaxes the standard and affords the plaintiff in a contract action a choice of remedy, unless: “(i) performance is impossible in law or in fact; (ii) the subject matter of the obligation does not lend itself to enforcement by specific performance or the cost of performance is excessive; (iii) the obligee does not require performance within a reasonable time.”²³⁶

The Chinese departure away from the money damages routinely awarded under Western contract regimes in favor of specific performance reflects a trend already under way in the United States. Under the common law, specific performance was once reserved for contracts where the subject matter could be demonstrated to be “unique”—like a work of art or a family heirloom.²³⁷ Over time, this limitation has softened such that specific performance could be had when the victim of the breach could show difficulty in obtaining a substitute for the promised performance.²³⁸

The UCC expressly softens the standard for specific performance from the more rigid common law rule. UCC section 2-716 provides that:

234. *Id.*

235. See John H. Matheson, *Convergence, Culture and Contract Law in China*, 15 MINN. J. INT'L L. 329, 356 (2006).

236. Contract Law of the People's Republic of China (promulgated by the Standing Comm. Nat'l People's Cong., Mar. 15, 1999, effective Oct. 1, 1999), art. 110 (China).

237. See Alan Schwartz, *The Case for Specific Performance*, 89 YALE L.J. 271, 272 (1979), <https://digitalcommons.law.yale.edu/ylj/vol89/iss2/2> (arguing that specific performance ought to be the presumptive form of relief for breach of contract).

238. See, e.g., *Sedmak v. Charlie's Chevrolet, Inc.*, 622 S.W.2d 694, 699–700 (Mo. Ct. App. 1981) (awarding specific performance of a Corvette pace car to wealthy car collectors with twenty-six other Corvettes in their collection because a substitute was available only at a much higher price and a great distance away).

(1) Specific performance may be decreed where the goods are unique or in other proper circumstances

[And] (3) [t]he buyer has a right of replevin for goods identified to the contract if after reasonable effort he is unable to effect cover for such goods or the circumstances reasonably indicate that such effort will be unavailing or if the goods have been shipped under reservation and satisfaction of the security interest in them has been made or tendered.²³⁹

The UCC, then, adds “other proper circumstances,” “goods identified to the contract,” a limitation to when cover fails, and “goods . . . shipped under reservation” to the common law requirement of uniqueness.²⁴⁰ This broadened availability of specific performance mirrors the deference to subjective value discussed earlier in UCC section 2-208’s provisions governing the hierarchy of interpretation.²⁴¹ Specific performance can be seen as tailoring relief for breach of contract to the specific parties involved. The tailored approach of specific performance, in short, approximates bespoke law.

IV. CONVERGENCE ACROSS ALL OF COMMERCIAL LAW

Contract law is not the only area of commercial law where we are witnessing convergence due to increasing competition in the market for law provision. Indeed, nearly every aspect of commercial law is witnessing convergence. Payment systems, secured transactions, warehouse receipts and bills of lading, and even bankruptcy law are being disrupted by more efficient technology and alternative sources of commercial law. These competitive forces are leading to a convergence upon “customized” commercial law, in which parties themselves can enjoy the benefits of their own bespoke legal regime.

A. PAYMENT SYSTEMS AND CRYPTOCURRENCIES

The most dramatic change in commercial law over the last twenty years has been in the area of payment systems. The UCC provisions governing negotiable instruments, notes, bank drafts, letters of credit, and even electronic funds transfers, have been rendered all but obsolete. This development is due to the rise of electronic funds transfers for large payments, credit and debit cards for small payments, and ACH transfers for everything in between.

239. U.C.C. § 2-716(1), (3) (AM. LAW INST. & UNIF. LAW COMM’N 2018).

240. *Id.*

241. U.C.C. § 2-208, cmt. 1 (AM. LAW INST. & UNIF. LAW COMM’N, withdrawn 2013) (“The parties themselves know best what they meant by their words of agreement . . .”).

UCC Articles 3, 4, and 4A provide for transactions involving bank drafts, credit and debit cards, and electronic funds transfers.²⁴² But as bank drafts go the way of the buggy whip, electronic payment methods have become ubiquitous. In fact, it is not clear that the provisions of Article 4A actually cover mobile telephone transfer payments, whether or not they occur over networks such as Tencent's WeChat (in China), Zelle or PayPal (in the United States), or MPESA (in Kenya, Pakistan, and Afghanistan).²⁴³

Furthermore, while these new forms of electronic money transfer and payment systems are closely-related offshoots of traditional ones, the new payment systems represented by blockchain technology and the cryptocurrencies that blockchain makes possible are not. Whether the UCC—or another commercial code—governs their workings seems increasingly irrelevant since these newer systems provide their own “law,” complete with “rules” of property and mechanisms of enforcement. With blockchain technology, parties to a payment transaction can not only design their own (bespoke) “law,” but they can also design their own (bespoke) “money.”

B. SECURED TRANSACTIONS AND SMART-KEYS

Security interests are ubiquitous in commercial finance, and accordingly, they are amply provided for in commercial law. A typical security interest arises when a lender is granted a residual property interest in chattel property, which is triggered if and when the borrower defaults on the loan.²⁴⁴ These arrangements were once referred to as “chattel mortgage[s]” and were frowned upon by courts of law.²⁴⁵ They gained recognition in the United States only after the passage of chattel mortgage acts in the states along the East Coast.²⁴⁶ Although the chattel mortgage is relatively young by commercial law standards (the first American chattel mortgage act was passed in 1820), the security interest in collateral is a standard concept in debt finance, and is employed by lenders to all classes

242. See U.C.C. §§ 3-101–4A-507 (AM. LAW INST. & UNIF. LAW COMM'N 2018).

243. See Ndubuisi Ekeke, *Arrival of AliPay and WeChat Will Challenge MPESA in Kenya*, TEKEDIA (June 19, 2018), <https://www.tekedia.com/alipay-wechat-challenge-mpesa-kenya> (describing all three mobile payment systems and the choices they afford consumers).

244. See George Lee Flint, Jr. & Marie Juliet Alfaro, *Secured Transactions History: The Impact of English Smuggling on Chattel Mortgage Acts in the Spanish Borderlands*, 37 VAL. U. L. REV. 703, 703 (2003).

245. See 1 GRANT GILMORE, SECURITY INTERESTS IN PERSONAL PROPERTY 26 (1999).

246. George Lee Flint, Jr. & Marie Juliet Alfaro, *Secured Transactions History: The First Chattel Mortgage Acts in the Anglo-American World*, 30 WM. MITCHELL L. REV. 1403, 1405 (2004) (detailing the adoption of the first chattel mortgage acts as an acknowledgment of the growth of secured transactions in the Eastern United States).

of borrowers, from the largest corporations down to the smallest consumer.²⁴⁷ In the United States, security interests are governed by UCC Article 9.²⁴⁸

The value of a security interest is that it provides a secured creditor two remedies in addition to those available to unsecured creditors, namely, (1) priority and (2) “self-help.”²⁴⁹ Priority means that the secured creditor, upon the debtor’s default, has first claim on the proceeds from the sale of the collateral.²⁵⁰ If the value of the collateral exceeds the secured creditor’s claim, the residual redounds to the debtor or the debtor’s other creditors.²⁵¹ In order to enjoy priority, however, a secured creditor or an officer of the courts must seize and sell the collateral.²⁵² In short, priority provides a secured creditor with some measure of peace of mind, but the value of the collateral remains inchoate until some (usually expensive) legal process is taken.

Self-help, on the other hand, is a slightly more salient remedy for some secured creditors, depending upon the collateral and debtor involved. By “self-help,” the law of debtors and creditors means that a secured creditor may take or disable the collateral as a means of securing payment of the underlying debt. Self-help can be effected through repossession or the padlocking of equipment, or by other means of disrupting the use of the collateral. The most important limitation on the remedy of self-help is that it cannot be exercised when it results in a “breach-of-the-peace.”²⁵³

Today, the practice of lending against collateral is becoming increasingly mechanized. Technology is quickly supplanting Article 9 of the UCC with respect to levying on property.²⁵⁴ If a lender wants a cheap, fast, and effective way to exercise self-help, one way to do so is to employ a “smart key.” A smart key is software or other electronic device that affords the secured creditor the ability to disable the collateral remotely, without ever approaching the physical proximity of the collateral or the debtor.²⁵⁵ If the

247. See GILMORE, *supra* note 245, at 26.

248. See U.C.C. §§ 9-101–9-809 (AM. LAW INST. & UNIF. LAW COMM’N 2018).

249. See Adam B. Badawi, *Self-Help and the Rules of Engagement*, 29 YALE J. ON REG. 1, 7 (2012) (describing the availability of the remedy of self-help to secured creditors).

250. See U.C.C. § 9-102(a)(73) (AM. LAW INST. & UNIF. LAW COMM’N 2018).

251. See *id.*

252. For a detailed analysis on the intricacies of self-help, see generally Badawi, *supra* note 249.

253. See *id.* at 14–17.

254. See *Blockchain-Based Lending*, MEDIUM (July 11, 2018), <https://media.consensys.net/blockchain-based-lending-1eee5edabe8a> (describing the ways in which blockchain technology can facilitate self-help in the context of smart loan agreements).

255. See Ben Sparango, *How Blockchain Based Lending Could Take Us from Billions to Trillions*,

collateral is a piece of manufacturing machinery, for example, a smart key might allow the secured creditor to turn off—and keep off—that machine until the debt obligation is paid or the credit account is brought current.²⁵⁶ Smart keys have been used to secure loans on automobiles, computer software, boats, factory equipment, and buildings.²⁵⁷ With smart keys, secured creditors can tailor their own bespoke self-help remedy to suit their particular situation.

C. WAREHOUSE RECEIPTS, BILLS OF LADING, AND BLOCKCHAIN

Warehouse receipts and bills of lading are particular types of negotiable instruments and were among the earliest forms of paper money.²⁵⁸ In commercial law, they are referred to as “document[s] of title.”²⁵⁹ In the United States, documents of title are governed by UCC Article 7.²⁶⁰ A warehouse receipt is precisely as the name implies: the owner of goods places those goods with a warehouse for safe keeping. In return, the warehouse gives the owner of the goods a warehouse receipt, entitling the owner, or the owner’s assignee, to collect the goods at a later date.²⁶¹

A bill of lading is similar to a warehouse receipt but involves goods in transit. The term “lading” is the Old English word for what we today call “loading.”²⁶² As goods were loaded onto a ship for transport, a bill of lading was issued to the shipper of the goods indicating title to those goods. The goods could then be shipped and collected by the shipper or the shipper’s assignee, namely, the buyer.²⁶³

Because both warehouse receipts and bills of lading could be assigned or “negotiated” to a third party, they, along with merchant promissory notes,

COINMONKS (May 20, 2018), <https://medium.com/coinmonks/how-blockchain-based-lending-could-take-us-from-billions-to-trillions-a1de3f948c88> (describing the various blockchain based lending platforms).

256. *Id.*

257. *Id.*

258. *See generally* ROBERT S. LOPEZ, *THE COMMERCIAL REVOLUTION OF THE MIDDLE AGES, 950–1350* (Cambridge Univ. Press 1976) (detailing the rise of commercial paper, bills of lading, and warehouse receipts as negotiable instruments during the Middle Ages).

259. Sandra Lim, *Bill of Lading*, INVESTOPEDIA, <https://www.investopedia.com/terms/b/billoflading.asp> (last updated Apr. 2019).

260. *See* U.C.C. §§ 7-101–7-704 (AM. LAW INST. & UNIF. LAW COMM’N 2018).

261. *See id.* § 7-202.

262. DAVID MELLINKOFF, *THE LANGUAGE OF THE LAW* 179 (1963) (explaining that the “bill of lading” is derived from the Old English word for “loading”).

263. *See* Richard Aikens et al., *Bills of Lading* 19–20 (2d ed. 2016) (describing the functions of bills of lading).

became the first forms of paper money used in the Middle Ages.²⁶⁴ These instruments entitled the bearer to the goods detailed in the document.²⁶⁵

One of the earliest uses of blockchain technology was to track shipments, authenticity, and quality across space and time. Today, everything from diamonds to fish are shipped and tracked with blockchain certainty.²⁶⁶ Blockchain technology can, in a very reliable and trustworthy fashion, track and transfer goods, both in warehouses and in transit. Accordingly, the need for warehouse receipts and bills of lading have diminished. Today, the owner or shipper of goods can reliably keep or send those goods without resorting to UCC Article 7 to resolve disputes regarding title, risk of loss, or payment. All of those functions can now be governed by the blockchain, and owners, sellers, shippers, buyers, and everyone else along the “chain of custody” can craft a tracking system perfectly aligned with their own particular needs. Such a system might even be called a “bespoke hub-and-spoke” system.

D. CORPORATE REORGANIZATION AND “PRE-PACKS”

One of the most ubiquitous transformations of commercial practice to customization does not involve advanced technology at all. Instead, it has occurred in the area of bankruptcy law. Large Chapter 11 corporate reorganizations have effectively become the most customized law of the twenty-first century because of the rise of “pre-packs.” A “pre-pack,” or “pre-packaged bankruptcy,” is a pre-negotiated reorganization that uses the bankruptcy courts as a rubber stamp for the true “creditors’ bargain.”²⁶⁷ A debtor or its key creditors initiate the negotiations when it becomes clear that the debtor’s operations and revenue stream can no longer support its debt load, but an adjustment of its capital structure might make it profitable.²⁶⁸ The key creditors also know that the provisions of Chapter 11 are designed to promote negotiations, even with the debtor’s smallest (in terms of claims) creditors who are given “hold-out” power under the code.²⁶⁹

264. *Id.*

265. *Id.*

266. See, e.g., Vishnu Rajamanickam, *Can Blockchain Revolutionize the Bill-of-Lading?*, FREIGHTWAVES (Dec. 8, 2017), <https://www.freightwaves.com/news/2017/12/8/can-blockchain-revolutionize-the-bill-of-lading> (exploring the efficiencies of blockchain bills of lading).

267. See Brian L. Betker, *An Empirical Examination of Prepackaged Bankruptcy*, 24 FIN. MGMT 3, 3 (1995) (defining a prepackaged bankruptcy as when “a firm . . . negotiate[s] a reorganization plan with its creditors, and possibly solicit[s] acceptances of the plan, prior to filing for bankruptcy”).

268. *Id.* at 5–7.

269. See Lemma W. Senbet & James K. Seward, *Financial Distress, Bankruptcy and Reorganization*, in 9 HANDBOOKS IN OPERATIONS RESEARCH AND MANAGEMENT SCIENCE: FINANCE 921, 951 (R.A. Jarrow et al. eds., 1995) (“[A] pre-packaged bankruptcy effectively circumvents the

The purpose of the pre-pack negotiations is to carefully tailor a plan of reorganization that maximizes the going concern value of the company but offers would-be holdouts enough to prevent them from blocking court confirmation of the plan.²⁷⁰ If the small creditors try to extract “nuisance value” from the other creditors by holding out, the pre-packaged plan is designed to affect “cramdown” on the objecting creditor by providing more under the plan than the objector would have received in a liquidation of the company’s assets. In short, we can think of pre-packs as the original bespoke law.

CONCLUSION

The rise of smart contracts has reintroduced fierce competition in the market for the provision of contract law. This competition once existed between the church and the state, but the state has long since wrested control over the provision of contract law from competing institutions. The state has solidified its monopoly over the provision of contract law, but, over time and at the margins, consumers of contract law have found substitutes. This slippage in the elasticity of demand for contract law has led the state to gradually make concessions to the consumers of contract law, increasingly tailoring it to the needs of the parties to the transactions involved.

These concessions were not enough. Today, parties are, quite literally, taking the law of contract into their own hands by crafting their own, tailor-made, self-enforcing “smart contracts” to suit their own particular circumstances. As this happens, jurisdictions around the world are engaged in a competitive response, providing more malleable contract law to suit the needs of the parties they hope to serve and govern.

holdout problem by allowing the court to force dissenting creditors to accept the proposed reorganization plan.”).

270. *Id.*