The Attributes of Transactions and the Limits of the New Formalism

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A recent movement in contracts scholarship—the so-called New Formalism—seeks to justify limitations on the introduction of extrinsic evidence to interpret contracts on the instrumental grounds of efficiency and empirical observation. Less attention has been directed at the development of a similar instrumental argument for the more contextual types of interpretation observed in the Uniform Commercial Code and the Restatement (Second) of Contracts. This Article engages this question by arguing that the relative ability of transactors to draft complete contracts is likely to be an important determinant of their preferred interpretive regime.

Where low contracting costs allow commercial parties to draft relatively complete contracts, it is understandable that these parties would have a strong preference for formal contract rules. This approach may best ensure the interpretation of these contracts in accordance with their express terms. But when contracts are more difficult to write—and hence contain more gaps—transactors may prefer interpretive rules that allow courts to fill in contractual gaps based on extrinsic evidence such as industry custom, unexecuted drafts, and other indications of the parties’ understanding of their obligations under the contract. At least in some instances, the use of this ex post evidence may be more cost effective relative to the ex ante investments that would be necessary to draft more complete contracts.

To explore this problem, this Article adapts the framework used to predict vertical integration in the New Institutional Economics literature to identify the variables that are likely to affect the ability to draft complete contracts. This adapted model argues that the frequency and uncertainty of a transaction are the key variables that will determine the amount that parties are likely to invest in filling contractual gaps. The predictions generated by this model help to explain why some transactors, such as the grain, cotton, and diamond merchants studied by Lisa Bernstein, have strong preferences for formal interpretation. The model also suggests why industries that involve infrequent and uncertain transactions—such as construction, tailored software, and the market for mergers and acquisitions—do not share the preference for formal interpretation advocated and observed by the New Formalists.
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I. INTRODUCTION

Ronald Coase’s two most prominent papers teach that transaction costs are a central determinant of legal and organizational boundaries.\(^1\) This insight spurred the New Institutional Economics, an intellectual framework that provides a detailed theory to predict how the transaction costs of contracting are likely to determine the vertical boundaries of firms.\(^2\) This literature has identified a series of transactional attributes to predict when contractual risk is likely to provide incentives for vertical integration. Vertical integration, however, is only one mechanism for minimizing the transaction costs associated with a particular type of purchase or sale. Formal and relational contracts between firms and individuals and the dispute resolution regimes chosen to resolve any related disputes provide another, less drastic, method for managing the risk inherent in transactions. This Article uses and expands the transactional attributes identified in the New Institutional Economics to explain why different types of interpretive regimes, such as general commercial arbitration, industry-specific arbitration, and public litigation under common law and the Uniform Commercial Code (“UCC”), might suit different kinds of transactions. This analysis suggests that the ex ante decision of how much to invest in filling contractual gaps is a key determinant of the interpretive regime that a given set of transactors is likely to prefer.

This theory has implications for the long-running debate between formalists and contextualists that has been a central focus of contract scholarship for more than a century. The early debates between staunch formalists such as Christopher Columbus Langdell\(^3\) and Samuel Williston\(^4\)

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2 Oliver E. Williamson is a chief figure in this literature. Williamson developed this theory in a series of articles that were then consolidated and expanded in his seminal book *Markets and Hierarchies: Analysis and Antitrust Implications*(1975). See also Oliver Williamson, *Markets and Hierarchies: Some Elementary Considerations*, 63 AM. ECON. REV. 316-25 (1973) (explaining the variables that likely influence a firm’s decision to either purchase goods on the spot market or produce the goods internally); Oliver Williamson, *The Vertical Integration of Production: Market Failure Considerations*, 61 AM. ECON. REV. 112-23 (1971) (same).


and proponents of contextual interpretation such as Arthur Corbin and Karl Llewellyn were central to the development of American contract law. The work of these formalists are featured prominently in the Restatement (First) of Contracts and held “virtually absolute sway” over contract theory in the early twentieth century. The contextualists subsequently increased their influence during the middle part of the century and their work strongly influenced the drafting of the UCC and the Restatement (Second) of Contract Law. As a general matter, these early debates between formalists and contextualists proceeded on the assumption that one mode of interpretation was superior to the other—courts should either interpret contracts in a formal manner that restricts the role of extrinsic evidence or in a contextual matter that invites the introduction of evidence from commercial reality—with little middle ground.

The underlying assumption that one interpretive approach is intrinsically superior to another has, at least to some degree, persisted in more recent debates. This modern contract scholarship has been heavily influenced by a group of New Formalists, who have developed a series of powerful empirical and theoretical critiques that challenge the contextualist vision realized in the UCC and in the Restatement (Second) of Contracts.

For example, Lisa Bernstein has carried out a series of empirical studies that question whether real world transactors act in a manner that is consistent with the assumptions that motivate the contextual rules in the UCC. Her

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5 As Corbin explains: “In almost all cases of contract, legal relations will exist, from the very moment of acceptance, that one or both of the parties never consciously expected would exist, and therefore cannot be said to have intended. Furthermore, the life history of any single contract may cover a long period of time, and new facts will occur after acceptance of the offer – facts that may gravely affect the existing legal relations and yet may have been utterly unforeseen by the parties.” Arthur L. Corbin, Conditions in the Law of Contract, 28 Yale L.J. 739, 740 (1919).


7 Llewellyn was one of the primary architects of the UCC. His scholarship and his imprint on the UCC reflected his belief that commercial rules should mirror commercial reality. See, e.g., Karl N. Llewellyn, The First Struggle to Unhorse Sales, 52 Harv. L. Rev. 873 (1939).

8 The terms “New Formalists” and “New Formalism” have been used to describe recent scholarship that advocates more formal interpretation of contracts and more formal default rules on the basis of instrumental reasons like as efficiency and observed preference. See, e.g. David Charny, The New Formalism in Contract, 66 U. Chi. L. Rev. 842 (1999). As Avery Katz explains, “[w]hat is new about this new formalism, both in contract scholarship and elsewhere, is that it attempts to explicitly ground formalism in functional terms; it tries to show how formal methods of interpretation help to forward practical goals such as efficiency, procedural fairness, and public accountability.” Avery Wiener Katz, The Economics of Form and Substance in Contract Interpretation, 104 Colum. L. Rev. 496, 499-500 (2004).
work on the arbitration system of the National Grain and Feed Association (“NGFA”) questions the basis and efficacy of the goal of Article 2 of the UCC to mirror commercial reality.\(^9\) Her investigation of the dispute resolution system of cotton traders casts doubt on the accepted wisdom that expectation damages are the preferred remedy for breach.\(^{10}\) Bernstein uses these empirical insights to make broad critiques of contextual interpretation—for example, in her NGFA study she concludes that “the [UCC’s] highly contextualized approach to adjudication is flawed because it mistakenly assumes that transactors’ actions under a contract are the best indication of what they intended their writing to mean.”\(^{11}\)

The New Formalists also include a number of legal economists who have questioned the efficacy of contextual interpretation. Omri Ben-Shahar has written powerful theoretical pieces that question the value of erosion doctrines, such as waiver and course of performance, that are central to the contextual interpretation of contracts.\(^{12}\) Likewise, Alan Schwartz and Robert Scott have developed an economic model that disfavors the use of extrinsic evidence in the interpretation of contracts between firms and, on the basis of this model, have advocated a series of reforms that “would radically truncate current contract law.”\(^{13}\) As a general matter, these theoretical investigations by New Formalists take a dim view of interpretive regimes that incorporate contextual default rules.

This Article argues that the desirability of an interpretive regime depends, at least to some degree, on the attributes of the underlying transaction and not solely on the independent merits of formal or contextual interpretation. That there is variation in interpretive preference is evident from the decisions of some transactors, such as those studied by Bernstein, to opt out of the UCC as well as from the choices of transactors not to opt out of the contextual default rules supplied by the UCC. To explain this variation, this Article develops a theory of investment in contract, which suggests that the cost and ability of transactors to draft complete contracts is

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\(^{11}\) Bernstein, *supra* note 9, at 1820. Bernstein also uses her findings to endorse a safe harbor provision to Article 2 that would allow transactors to opt out of the Code’s provisions on usage of trade, course of performance, and course of dealing. *Id.* at 1821. Bernstein does, however, suggest that the more contextual provisions of the Code may be appropriate for disputes between merchant-to-consumer relationships. *Id.* at 1820.


an important determinant of how transactors will respond to a dispute resolution market that provides a wide array of choices. This theory suggests that debates about the inherent desirability of a given mode of contract interpretation should be driven by the reasons for the wide variety of positive choices transactors make about their desired dispute resolution forums rather than through economic models that seek to accommodate all commercial actors or through empirical observations of a limited slice of commercial behavior.

This model predicts that the less contextual rules endorsed by the New Formalists are likely to be preferred where transactions are frequent and certain because those situations present optimal conditions for drafting nearly complete contracts, which parties would want enforced by the agreement’s express terms. This preference is, perhaps, most evident in the high-frequency commodity transactions studied by Bernstein. It is a much easier proposition to draft these sorts of uncomplicated contracts that reflect significant experience with repeated transactions than it is to draft a contract that will govern an infrequent highly-complex transaction. Under these circumstances, the more contextual rules supplied by Article 2 of the UCC and (to a lesser extent) the common law may provide the best available option for resolving disputes.

A recent Delaware case demonstrates that the parties to these types of infrequent, uncertain, and high-stakes transactions may prefer a dispute resolution forum that will be more solicitous of extrinsic evidence than the industry-specific arbitration boards studied by Bernstein. In United Rentals, Inc. v. RAM Holdings, Inc., Chancellor Chandler interpreted a merger agreement that had inconsistent provisions as to the remedy if the transaction failed to close. The merger agreement, drafted under intense time pressure, was a highly complex document that governed a one-time transaction. As discussed more fully below, the parties did not opt for a dispute resolution forum that would limit itself to the terms of the contract; instead, the parties chose a Delaware court that was willing to hold an extensive trial, during which the court examined not only the terms of the contract, but also considered extensive evidence of the drafting history—including a close analysis of unexecuted drafts of the contract—and ultimately decided the case on the basis of evidence of what one party knew about the subjective intent of the other party.

While cases like United Rentals represent one end of the spectrum of interpretive preferences, there are many other dispute resolution options that can accommodate those who may not have such clearly defined desires for formal or contextual interpretation. For example, general commercial

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14 United Rentals, Inc. v. RAM Holdings, Inc., 937 A.2d 810 (Del. Ch. 2007). See infra Sec. IV.B for a discussion of applied examples including United Rentals.
arbitration may be attractive where secrecy insulates transactors from
damage to reputation and publication of trade secrets. Likewise, insular
communities of transactors may be able to avoid this choice almost entirely
because extra-legal means of regulation and punishment provide an
inexpensive and attractive method of resolving commercial disputes.

This Article proceeds as follows: Section II draws on the New
Institutional Economics literature to identify the attributes of transactions
that are likely to have a significant effect on the costs of contracting. The
general theme of this framework is that variables that make contracting
more difficult and costly will tend to favor more contextual rules for dispute
resolution. Section III reviews the work of New Formalists with reference
to the framework introduced in Section II. Section IV applies the
framework developed in Section II in a more technical manner by providing
more detailed explanations of how the individual attributes of a transaction
are likely to affect the cost of contracting. This section also uses the
attributes of these transactions to predict the effect of each variable on the
likely interpretive preference of the participants in a transaction with a
given attribute. Section V synthesizes and concludes by generating a set of
predictions of interpretive preference based on the attributes of different
transactions.

II. A TRANSACTIONAL ATTRIBUTE MODEL

Oliver Williamson developed a celebrated framework for explaining
vertical integration. Williamson analyzed the “make or buy” decision by
using a series of transactional attributes to predict whether a firm would
produce a needed good or service in-house or turn to the spot market to
purchase the good or service. Williamson identified three primary variables
in a transaction that influence this make-or-buy decision: frequency,
uncertainty, and asset specificity. This section explains Williamson’s
predictions of how these variables are likely to impact vertical integration,
and it then builds on this analysis to predict how these variables are likely to
affect the costs of contracting. What emerges from this analysis is that
frequency and uncertainty are likely to have strong effects on the costs of
contracting while asset specificity has a more limited impact on these costs.
In addition, this section explains how the degree of insularity in a
community of transactors can affect the amount of investment in formal
contracting. This framework of transactional attributes provides a

\[15\] While general commercial arbitration tends to involve contextual approaches to
interpretation, there is substantial variation because the interpretive approach taken in any
given arbitration depends, in large part, on the particular style of the arbitrator.

\[16\] See Oliver E. Williamson, Markets and Hierarchies (1975).
mechanism for evaluating and limiting some of the claims of the New Formalists, which are examined more closely in Section III. This framework also provides a set of predictions on how the attributes of a transaction are likely to affect the preference of transactors for different types of interpretive methods, which is analyzed in more detail in Section IV.

A. Frequency

In the context of contracting, frequency refers to the number of times a firm or individual carries out a particular type of transaction. Frequency is a prominent variable in the analysis of vertical integration because as the frequency of a given transaction increases, it creates economies of scale. If a firm makes use of a given good only infrequently, the marginal cost of producing the good will be considerably higher than the marginal cost of buying the good on the spot market. As the firm engages in a transaction more frequently, however, the firm can realize the economies of scale associated with production and eventually the production price will approximate the spot market price. All other things being equal, as the frequency of a transaction increases, the justification for producing a good in-house becomes stronger. By producing in-house, the firm avoids the transaction costs and risks associated with contracting for the good while also realizing the economy of scale that comes with high frequency.17

With respect to contract drafting, increased frequency of a particular transaction will tend to reduce the cost of drafting a contract to govern that transaction. The widespread use of form contracts attests to these economies of scale.18 As a transaction becomes more frequent, all other things being equal, the marginal cost of drafting a contract to govern the transaction should tend to decrease. One reason for the decrease in the per-transaction costs of contracting is that a single form contract can govern multiple instances of a transaction. In addition, with increased frequency, transactors can learn more about the contours of the repeated transaction. This experience will likely translate into better, more complete, contracts that govern the transaction. Where transactors are able to draft nearly complete contracts, there may be a preference for more formal types of adjudication because the contracts contain few gaps; thus, there is little need for extrinsic

evidence. Bernstein’s study of NGFA contracts, which govern transactions with a very high frequency, may provide an example of this situation.19

The frequency attribute also has important consequences for the efficiency of norm generation. Robert Cooter advances the theory that norms in decentralized industries evolve to efficiency, thus courts should use these efficient norms to fill contractual gaps.20 There is, however, significant debate on the question of whether norms do in fact evolve to efficiency. Cooter argues that where incentives support the generation of efficient commercial norms, judges should raise these norms to the level of law.21 Eric Posner is skeptical of the claim that norms reflect efficient practices and argues that norms are unlikely to be efficient when judged by the standard that they “enable group members to exploit the full surplus of collective action.”22

Posner identifies a number of reasons why norms might persist even though they fail to allow a community to obtain all the gains that could be created through joint action. He cites information costs and lags as potential sources of inefficiency. To support this argument, he points out that in Harold Demsetz’s well-known study of property rights among native tribes in Canada the lag between the development of property-right norms and the advent of the fur trade was two hundred years.23 Posner also argues that strategic behavior, morality, envy, and negative externalities can contribute to the inefficiency of norms by allowing a social rule to remain in place even though there may be superior rules vis-à-vis social welfare.24 This article formed the foundation of Posner’s book on social norms, which argues that norms are sometimes a wasteful mechanism for signaling one’s discount rate to others.25

19 See Bernstein, supra note 9, at 1774 (“Arbitrated claims over unforeseen contingencies are rare.”)
21 Cooter, New Law Merchant, supra note 20 at 1694-95. (“An appropriate incentive structure is one in which incentives for signaling by individuals align with the public good (long-run relations, convexity, no spill-overs.”)
23 Id. at 1712-13 (citing Harold Demsetz, OWNERSHIP, CONTROL, AND THE FIRM, 107-09 (1988)).
24 Id. at 1713-23.
25 See generally ERIC A. POSNER LAW AND SOCIAL NORMS (2000). Though an in-depth examination of the efficiency or inefficiency of norms is outside the scope of this project, several of Posner’s arguments bear on the desirability of incorporating norms into
B. Uncertainty

Another variable that has important implications for the governance of transactions is uncertainty. In the Williamsonian analysis of vertical integration, uncertainty increases the contractual risk associated with a given transaction.\(^{26}\) Uncertainty arises, in large measure, due to the concept of bounded rationality—pioneered by Herbert Simon. Williamson characterizes Simon’s concept as referring to human limits “on the capacity to understand the contracts. First, the standard used by Posner is an ideal that does not take into account the transaction costs associated with a governance mechanism such as social norms, legal rules, or different organizational forms. Although it may be the case that using social norms to govern a particular phenomenon is inefficient relative to a world free of transaction costs, it is the least inefficient governance mechanism when compared to other alternatives. Second, and more importantly for the purposes of this project, the frequency of a given transaction is almost certain to make an industry norm more efficient. Recognized norms provide a means for quickly conveying information about appropriate practices, and as such, can reduce the transactions costs associated with a given interaction. The more frequent a given transaction takes place, or put differently, the more liquid the market for a transaction, the more comfortably one can assume that a norm reflects roughly efficient practices. The reason a norm governing frequent transactions is more likely to be efficient is that the increased frequency means that there are increased savings to be had by altering the norm to make it more efficient. The prospect of these large savings puts competitive pressure on the norm, which should lead to more efficient practices. Alternatively, if a transaction takes place only infrequently then there is less competitive pressure to optimize the norm.

While frequency contributes to the efficiency of norms, it is important to distinguish different types of frequency and the effect they are likely to have on the efficiency of norms. There are three relevant dimensions of frequency. The first is global frequency, meaning the rate at which a transaction takes place in the market place as a whole. The second type of frequency is firm-specific frequency, referring to the number of times any one firm conducts a certain transaction. The last type of frequency is partner-specific frequency, meaning the rate at which the same two parties conduct a certain transaction.

Where transactions are globally frequent, the likelihood of norms arising to govern these transactions is high, all other things being equal. If, however, a transaction is globally frequent, and any given firm conducts the transaction on an infrequent basis, there is probably a lower likelihood that the norms concerning this transaction are both standardized and efficient. If a transaction is frequent on both global and partner-specific dimensions, then the norms governing the transaction are likely to be efficient, however because individual relationships may develop different contours it is less likely that norms will be standardized across an industry. The ideal mix of frequency dimensions for producing standardized and efficient norms are high rates of global and firm-specific frequency with relatively lower levels of partner-specific frequency. Such a situation would be characterized by a group of buyers and sellers conducting many similar transactions, where the rate that any one seller deals with the same buyer is relatively low. This state of affairs would provide the brightest prospects for using norms to fill gaps because those norms are likely to represent efficient practices.

\(^{26}\) See Oliver E. Williamson, Antitrust Economics 74-78 (1987).
to receive, store, retrieve, and process information without error and to definitional limits inherent in language."\(^{27}\) Williamson argues that the uncertainty that comes with bounded rationality leads to organizing transactions internally rather than through reliance on spot markets. Relying on internal organizational mechanisms attenuates the risks posed by opportunism inherent in market transactions.

Williamson’s definition of bounded rationality can be elaborated by distinguishing between two types of uncertainty: *predictive* uncertainty and *linguistic* uncertainty. Predictive uncertainty refers to a situation where the number and type of contingencies associated with a given transaction are unknown, which makes it difficult to identify contract terms to govern the transaction. Linguistic uncertainty refers to situations where there is difficulty in describing the nature of an agreement, which means that predicting the outcome of litigation will be difficult. Both predictive and linguistic uncertainty can complicate contracting by increasing the investment necessary to write a sufficiently complete contract. There are several potential responses to these types of uncertainty to mitigate the risk they create. First, if the problems are especially acute there may be an incentive for vertical integration of businesses, as long as there is sufficient transaction frequency to justify this decision. Vertical integration eliminates the problems with dispute resolution and interpretation analyzed here, because any dispute is dealt with through internal edict rather than by a third party arbiter. Second, one may also observe transactors opting out of legal systems they believe lead to uncertain outcomes.\(^{28}\) Bernstein’s work on the independent arbitration systems of grain dealers and cotton transactors examines this type of response to adjudication under the sometimes uncertain provisions of Article 2 of the UCC.\(^{29}\) Finally, transactors may choose to leave gaps in contracts and hope that if a transaction goes awry and results in litigation, courts will be able to adequately fill the gaps.

C. Asset Specificity

Asset specificity is a measure of how much value a firm can recoup from an asset if a transaction goes awry.\(^{30}\) The more specific an asset, the

\(^{27}\) *Id.* at 75-76 (citations omitted).
\(^{28}\) The term “opting out” does not mean leaving the system of public adjudication entirely. For example, a group of transactors may opt out of most of the requirements of Article 2 of the UCC while still resorting to other pieces of the UCC when less likely contingencies, such as bankruptcy, take place.
\(^{29}\) See Bernstein, *supra* note 9 at 71-77 (discussing the operation of the NGFA system); Bernstein, *supra* note 10 at 1726-28 (describing adjudication in the cotton industry).
\(^{30}\) For a up-to-date treatment of asset specificity, and an empirical measurement of this
less a firm can recoup from a failed transaction. The prototypical examples of specific assets are car bodies. If a firm contracts with an auto manufacturer to make car bodies, there is substantial contractual risk associated with this transaction—if the transaction fails, there is little open market value for the car bodies because they were specifically designed to meet the needs of the automobile manufacturer. As a result, highly specific assets are strong candidates for internal organization. The acquisition of Fisher Bodies by General Motors in the 1920s is a common example of an auto manufacturer choosing to make rather than buy a specific asset.\(^{31}\) In contrast, where a good is more fungible, such as a tire, the asset is not as specific and a firm is more likely to procure such a good on the open market.

The consequences of asset specificity on the issues of interpretation at issue in this analysis are not entirely clear. It is safe to assume that if an asset is highly specific, then issues of formal versus contextual adjudication are unimportant because firms are likely to integrate and manage the transactions internally. At low levels of asset specificity, where there is substantial resale value of a good combined with non-negligible contractual risk, there may not be enough incentive for vertical integration. If firms do not integrate, they must decide on a dispute resolution mechanism for their market transactions. This decision implicates the formal versus contextual question at issue in this project.

A central hypothesis of the analysis in this Article is that high contracting costs are likely to result in preferences for more contextual types of adjudication. The core intuition underlying this prediction is that transactors will take their chances with the provisions a court or arbitrator will use to fill gaps when it is prohibitively expensive to write reasonably complete contracts that serve as a useful guide for interpretation. While the role of frequency and uncertainty on the cost of contracting seem straightforward enough, it is less clear whether asset specificity will have a predictable impact on the costs of contracting. On one hand, the small-numbers bargaining situations that come with asset specificity may mean that the market for norms is not sufficiently liquid to assure that norms reflect efficient practices. Alternatively, the transaction at issue may occur frequently enough to alleviate liquidity concerns. What appears to drive the result, however, is frequency and uncertainty rather than asset specificity per se.

D. Insularity

Where a community of transactors is relatively insular there may be consequences for contracting and related dispute resolution decisions. Insularity, which is largely a function of group size and the ability of the group to convey reputational information, can make meaningful the threat of ostracism for bad faith behavior. The analysis of insularity is generally absent from discussions of vertical integration, but it is potentially important for managing transactions that may result in litigation. An insular community of transactors has an easier ability, all other things being equal, to impose costs on non-cooperators through the use of reputational sanctions. Given the option of imposing reputational sanctions on disreputable transactors, there may be an incentive to minimize the role of formal written contracts and structured dispute resolution.

In an insular network, social sanction could also be used in conjunction with more formal types of dispute resolution. Indeed, Cooter and Porat have explored one dimension of this type of hybrid by analyzing whether social sanctions should affect the damage awards courts make.\(^\text{32}\) They find that in order to properly incentivize actors, courts should deduct non-legal sanctions from damage awards to prevent over deterrence of valuable activities.\(^\text{33}\) Cooter and Porat take the court system as a given and do not analyze the potential for transactors to opt out of public adjudication when non-legal sanctions are effective within a community of transactors. Nevertheless, their insight is useful in the commercial law context. A separate system of adjudication would allow transactors to impose lower awards that may be cheaper to administer, and yet, they would be just as effective if they prompted non-legal sanctions within the community. For example, Lisa Bernstein finds that cotton traders forego the expense associated with computing expectation and consequential damages in favor of an under-compensatory market difference formula.\(^\text{34}\) This market difference formula, based on the difference between the contract price and the market price at breach, is much cheaper to compute because it does not entail the discovery necessary to determine lost profits and consequential damages. Transactors can make up for the inexact contract damages by imposing reputational sanctions on bad faith transactors.

Within an insular network of transactors, the availability of non-legal sanctions to govern transactions may lead to a preference for more


\(^{33}\) *Id.* at 420-21.

\(^{34}\) See Bernstein, *supra* note 10 at 1733.
streamlined types of adjudication. There is, however, at least one potentially mitigating factor. The more thorough a system of dispute resolution is, the more confidence one presumably can have in its findings. If an industry is insular enough that reputation plays a large role, then there may be value to a thorough system of dispute resolution because transactors can have more confidence in any findings made during litigation. These findings, insofar as they reveal truthful information about the parties’ courses of dealing, would presumably affect reputation in a way that benefits the community of transactors.

The role of insularity in deciding how to resolve disputed transactions will turn on this tradeoff between cost-effective dispute resolution and the value of reputational information that litigation reveals. This tradeoff invokes the difference between observable versus verifiable information used by Bernstein in a number of her studies. She defines observable information as “information that it is both possible and worthwhile for transactors to obtain” and verifiable information as “information that it is worthwhile for transactors to prove to a designated third-party neutral in the event of a dispute.” She argues that transactors will only allocate terms based on information that is both observable and verifiable to written contracts and will leave other terms to extralegal agreements.

If a particular industry involves a lot of information that is easy to observe but difficult to verify, insularity should promote streamlined dispute resolution. The reason for this preference is that the ability to observe information promotes the use of reputation to ensure trustworthiness. The high expense associated with verifying information, which is already known due to its ease of observation, means that extensive and expensive litigation will produce little or no useful information. Alternatively, where information is difficult to observe, but relatively easy to verify, there may be a preference for more thorough and contextual types of adjudication. For example, where firms conduct research about safety tradeoffs, it may be difficult to observe safety tradeoffs in the finished product but relatively easy to verify the tradeoff decisions through the litigation discovery process. In general, as long as information is observable, informal gossip networks should be sufficient to cheaply supply reputation information. Where information is not observable there may be value to an insular community having more intensive systems of dispute resolution.

Recent work by Amitai Aviram analyzes the necessary conditions that would permit insular groups of transactors to create self-sustaining

35 Bernstein, supra note 9, at 1792.
36 Id. at 1791-92.
private legal systems (“PLSs”). Aviram contends that in order for a community to generate a viable private system of legal governance there must be a set of low-cost norms that reward participation in the emerging PLS. Private legal systems are networks that increase the surplus of members by meting out penalties for those who do not abide by the norms of the network. This penalty system allows for commitments between members to be more credible because they are backed by the formal and informal sanctions of the group. Aviram argues that for PLSs to form, they must begin by enforcing low-cost norms, otherwise people would not choose to opt into the network because the costs of norm violation outweigh the benefits of network membership. Once the network grows larger, offering the members more benefits, the network can enforce more costly norms, such as banishment from the network, in order to provide even greater benefits to network members. Aviram’s work, like Bernstein’s to some degree, emphasizes the ability of an insular network to police the behavior of members at a cost that is often below the use of more formal legal systems. These insular networks can lower the cost of contracting by decreasing expected dispute resolution costs. Of course, insular networks also facilitate cartel behavior, particularly where the costs of exclusion are large. This tension between economies of scale in contracting provided by groups and the dangers of restricted output and barriers to entry posed by cartel behavior present an interesting problem concerning the desirability of PLSs. The Hayekian tradition of spontaneous private ordering celebrates decentralized decisions such as those to form PLSs. At the same time, the potential inefficiencies created by cartel behavior may attenuate enthusiasm for these PLSs.

III. The New Formalism

This section reviews the work of the New Formalists with reference to the framework set out above. This section begins with a discussion of Lisa Bernstein’s series of empirical studies that demonstrate a strong

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preference by some groups of transactors for formal rules of contract interpretation that deviate significantly from the contextualist framework supplied by Article 2. A discussion of theoretical work that supports the New Formalism follows.

A. Bernstein’s Empiricism

Lisa Bernstein has studied three industries that have opted out of the public legal system by setting up industry-specific dispute resolution systems. The central theme of this work, which Jason Johnston has deemed the “Bernstein Conjecture,” speculates that the legal rules reflecting commercial reality can undermine the flexible commercial norms and practices that these rules seek to promote.\(^{41}\) This section reviews the substantial depth in her studies of the diamond, grain, and cotton industries with a specific focus on what these works say about the attributes of the underlying transactions and the relationship of those attributes to the dispute resolution systems established by these industries.

1. The Diamond Industry

Bernstein’s first major empirical study surveyed the dispute resolution practices of the diamond industry. One primary observation was the strong preference among diamond industry members for private governance of contracts rather than adjudication in public courts. The diamond industry’s dispute resolution system combines mechanisms such as reputation bonds, customary business norms, and a private arbitration system with its own rules and means of enforcement. Bernstein attempts to explain this preference by focusing on the institutional features of the diamond industry that make conventional adjudication unattractive. In particular, diamond dealers appear to prefer arbitration because it is quicker, less expensive, and more secret than conventional adjudication.\(^{42}\)

While Bernstein did not significantly engage questions of formal versus contextual interpretation until her 1996 article on NGFA, her study of diamond dealers does provide enough information to discuss both the attributes of the transaction and the interpretational preferences of the transactors. Bernstein centers her study on the New York Diamond Dealers Club (“the Club”). The Club is a bourse for both rough uncut diamonds and polished stones. About eighty percent of the rough cut diamonds coming

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into the United States at some point pass through the hands of a Club member as do twenty to fifty percent of the polished stones.\textsuperscript{43} When Bernstein published her study, the Club had roughly 2,000 members.\textsuperscript{44}

While Bernstein does not provide exact numbers, it is clear that a large number of transactions take place between Club members. The relatively small group of members combined with large number of transactions ensures relatively high amounts of global frequency, firm-specific frequency, and partner-specific frequency.\textsuperscript{45} As one would expect with high levels of all types of frequencies there is a firmly established set of trade norms, some of which the Club has codified and others of which are “generally known and accepted.”\textsuperscript{46} This high level of frequency means that there will be significant economies of scale for contract drafting. These savings from the drafting economies will turn, at least to some degree, on how certain or uncertain the underlying diamond transactions are.

Bernstein explains that the diamond industry is seasonal. This structural feature requires buyers to purchase relatively large quantities of uncut diamonds in short periods of time. These large purchases necessitate access to credit and also mean that simultaneous exchanges without executory agreements are not always feasible.\textsuperscript{47} This need for contracts also means that there is a need for dispute resolution, and the Club mandates that all members submit any dispute to the Club’s own arbitration system.\textsuperscript{48} Bernstein reports that approximately 150 cases go to arbitration annually and roughly 85% of these cases settle.

She puts the cases that do not settle into three general categories—(1) cases with explicit remedies in the trade rules; (2) cases without explicit remedies but that are well-known and consistent norms for deciding the cases; and (3) complex cases that arbitrators “either decline to hear or decide in accordance with rules of decision and damage measures that neither party can predict ex ante.”\textsuperscript{49} Bernstein does not provide a distribution of the number of cases falling into each category. She does, however, note that the decisions of the arbitrators in the third category have an ad hoc nature and seem to be decided on the basis of “trade custom and usage, a little common sense, some Jewish law, and, last, common-law legal principles.”\textsuperscript{50} Bernstein claims that the diamond dealers complained about

\begin{itemize}
  \item \textsuperscript{43} Id. at 119.
  \item \textsuperscript{44} Id.
  \item Most dealers transact by themselves, meaning that firm-specific frequency refers to how often any one dealer engages in diamond transactions.
  \item \textsuperscript{46} Id. at 126.
  \item \textsuperscript{47} Id. at 130.
  \item \textsuperscript{48} Id. at 124-25.
  \item \textsuperscript{49} Id. at 126.
  \item \textsuperscript{50} Id. at 127. For a further discussion on the ad hoc nature of arbitration see Sec. V(B),
\end{itemize}
the lack of standards in the third category of cases. She supports this claim by noting that the arbitrators do not issue formal findings and that there are no rules to guide damage awards.\footnote{id}

The fact that there are cases in the third category speaks to some degree of uncertainty in diamond transactions. Apparently the codified trade rules, trade norms, and the written contracts underlying the transactions do not address the circumstances that arise in these complex disputes. Without enumerating the number of cases of this type she does suggest that the cases that do not settle come predominantly from the third category. The ad hoc nature of the standard used to decide cases in this third category implies that there is uncertainty both with respect to the types of disputes that may arise and uncertainty with respect to how the arbitration board may decide these cases. The ad hoc standard also demonstrates that there is not a strict preference for the formal types of interpretation that Bernstein finds in her other studies of dispute resolution. The preference for more contextual types of adjudication supports one of the predictions that comes out of the transactional paradigm used in this project. Namely, that where there is uncertainty with respect to the circumstances or interpretation of a transaction there will be less of a preference for formal types of adjudication.

2. The National Grain and Feed Association

In her NGFA study, Bernstein finds hostility to some of the more contextual provisions of Article 2, such as those using evidence of course of performance, course of dealing, and trade norms to fill gaps in contracts. She not only documents the preference for formal interpretation, but she provides a theory of why the strict, arms-length provisions embodied in both the contracts governing grain transactions and the rules guiding the interpretation of these contracts deviate from the informal, almost blasé, interactions that typify relationships between grain dealers.

She posits that grain dealers and merchants operate under two sets of norms when dealing with one another. Relationship preserving norms (RPNs) reflect the practices of transactors who expect to continually deal with one another. These practices allow conduct that differs from the formal terms typically found in grain contracts. For example, grain merchants will often use each others’ unsupervised weights to avoid the high cost of official weights even though grain contracts usually contain clauses requiring the use of official weights.\footnote{id} She theorizes that the arms-length

\footnote{id}{\textit{infra.}}
\footnote{id}{\textit{Id.}}
\footnote{id}{See Bernstein, \textit{supra} note 9, at 1799.}
terms in grain contracts reflect end game norms (EGNs), which transactors use when a relationship sours. She argues that transactors understand the difference between RPNs and EGNs and allocate governance of their trading relationships in a way that maximizes the value of the transaction.\(^{53}\)

Bernstein argues that the formal adjudication system of NGFA embodies the desire of grain merchants to have contracts interpreted strictly according to the EGNs contained in the contracts. While Bernstein may overstate this claim,\(^{54}\) there does seem to be an aversion on the part of grain merchants to more contextual types of adjudication. The model developed in this Article suggests that this preference is a product of the attributes of grain transactions. In particular, the grain transactions carried out by NGFA transactors are high in frequency and low in uncertainty making them ideal candidates for formal modes of adjudication.

The grain transactions studied by Bernstein appear to be high on all levels of frequency. NGFA is made up of over 1,000 firms who handle over two-thirds of the U.S. grains used in domestic and international markets.\(^{55}\) This high level of frequency is almost certainly adequate to ensure enough transactions to support the generation of efficient norms and large economies of scale for contracting costs. This wide coverage of the grain markets means that the NGFA trade rules and arbitration system, which all members must abide by as a condition of membership, reflect a large number of transactions. NGFA has a series of trade rules to govern different industries within the grain and feed trade. The oldest of these sets of rules was promulgated in 1902 and are regularly updated to reflect both changing

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\(^{53}\) Id. at 1789.  
\(^{54}\) For example, she writes in a footnote: “There are a few cases where the language of the decision suggests that the arbitrators are ruling on the basis of custom. However, a closer look at the facts of these cases reveals that the same results could easily have been reached on the basis of the trade rules alone.” Id. at 1778 n. 46. This language suggests that some of the arbitrators she investigates may not take as formal an approach as she suggests. She argues that one could reach these outcomes on the basis of trade rules; however this is her interpretation, and not that of the actual arbitrators.  
Cases published since Bernstein conducted her study display a more contextual approach than those cited in her article. For example, in one case the NGFA arbitrators ignored the requirement that a modification be in writing because it was a trade norm to agree to modifications orally: “Although Tommy Farms did not issue a written confirmation of the contract change as required under ‘Old Grain Trade Rule 41’ [current Grain Trade Rule 4], the arbitrators determined that it was the custom of the trade that producers do not write contracts or contract amendments, but only receive and sign written confirmations sent by grain companies.” NGFA Arbitration Case Number 2002, available at http://www.ngfa.org/article.asp?article_id=1890 (emphasis added).  
\(^{55}\) See http://www.ngfa.org/ngfaprofile.asp.
business practices and the experiences learned by the large number of transactions governed by the rules.\textsuperscript{56}

With respect to uncertainty, Bernstein notes that “[o]ne of the main reasons that a formalistic approach is well-suited to NGFA’s adjudication of disputes is that the types of events that can disrupt a grain or feed transaction are, except in highly unusual circumstances, known by transactors at the time of contracting.”\textsuperscript{57} This low level of uncertainty means that it is possible to write nearly complete contracts. The high frequency of grain transactions also assures that there are economies of scale to drafting these contracts. These twin features of high frequency and low uncertainty mean that the costs associated with drafting contracts are likely to be quite low. Given the low costs for drafting relatively complete contracts it is not surprising that NGFA transactors appear to have a preference for formal adjudication that facilitates enforcing the strict terms of the contracts. The experience reflected in the form contracts means that adjudicators should defer to clauses that limit the amount of contextual evidence such as no oral modification clauses, limitations on the use of course of performance and dealing, and trade norms contrary to the black letter contract.

3. The Cotton Industry

Bernstein has also studied the cotton industry’s system of adjudication.\textsuperscript{58} This study, like her NGFA research, found a relatively tightly knit group of transactors using a mixture of formal legal rules and extralegal reputational sanctions to govern transactions. The cotton industry has a longstanding and independent system of dispute resolution that favors relatively formal rules. Bernstein notes that the trade rules largely contain “bright-line” rules rather than standards such as those requiring reasonableness.\textsuperscript{59} In addition, the cotton arbitration rules specify under-compensatory market damages rather than fully compensatory expectation damages. This measure of damages streamlines the dispute adjudication process because it limits the amount of discovery, while also protecting sensitive private information.\textsuperscript{60}

Like the diamond and grain industries studied by Bernstein, the attributes of the transaction are well suited to formal modes of dispute

\textsuperscript{56} See http://www.ngfa.org/trexplan.asp.
\textsuperscript{57} Bernstein, supra note 9, at 1816.
\textsuperscript{58} See Bernstein, supra note 10
\textsuperscript{59} Id. at 1732-33.
\textsuperscript{60} Id. at 1733.
resolution. With respect to frequency, Bernstein describes the cotton market she studies as having a “high velocity” of transactions. This high frequency of transactions means that conditions support efficient trade norms and that there are economies to drafting standard form contracts. Unsurprisingly, Bernstein reports that the cotton industry makes widespread use of form contracts and has also codified trade norms to increase the certainty in dispute resolution.

As one would expect in an industry that uses a highly formalistic dispute resolution system, there are relatively low amounts of uncertainty surrounding cotton transactions. A primary cause of breach in the cotton industry is shortages due to unfavorable weather. This situation is not infrequent and most transactors have established methods of accommodating weather-related delay. It is relatively easy to describe the causes of shortages; thus, there is little uncertainty with respect to the difficulty in describing possible states of the world. Moreover, the formalistic dispute resolution system of the cotton industry ensures that adjudicative outcomes are relatively easy to predict.

Bernstein places much of her focus on the ability of cotton transactors to use reputational sanctions against dealers perceived as unscrupulous or untrustworthy. It makes sense that if cotton transactors can use relatively cheap and effective reputational sanctions to punish suspect dealers, then there would be little interest in the added expense of contextual types of adjudication. The efficacy of these reputational sanctions depends, at least in part, on the insularity of the community of transactors. Insularity will usually mean that information travels quickly. Indeed, Bernstein reports that the cotton industry has vibrant gossip networks that expeditiously convey reputational information about dealers.

Close-knit communities may or may not have to rely on exclusionary sanctions to punish members who deal with those excluded from the group. If a particular dealer gains a reputation for being untrustworthy, then transactors are merely looking after their own self-interest by refusing to deal with the supposedly untrustworthy transactor. Alternatively, if a transactor gains an unfavorable reputation for undercutting an agreement that is in restraint of trade then it may take policing efforts by the group to exclude the blighted transactor from business dealings. The simple reason for policing is that it may be in the interest of group members to clandestinely transact with the cartel violator. Thus to maintain any agreement in restraint of trade, the group may also need to punish through exclusion members transacting with other group members who violate cartel agreements.

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61 Id. at 1755.
Bernstein reports that the rules of dispute resolution in the cotton industry require that party names be redacted out of published opinions. This method contrasts with the NGFA arbitration system where party names are published in opinions. Bernstein explains this cotton industry practice as a means of minimizing the reputational damage to a seller. The tight networks between cotton dealers ensure that gossip will let insiders know of any misdealings by other insiders. However, outsiders are not privy to this gossip network, and thus will not learn the identity of insiders who are on the losing end of dispute resolution.

4. Review

This section demonstrates that the industries Bernstein studies share a number of attributes. The transactions in these industries tend to be high frequency, low uncertainty, and take place in the context of high insularity. These attributes are particularly amenable to the formal types of interpretation that Bernstein argues these industries prefer. One reason for this preference is that in transactions with these attributes one can draft a relatively complete contract at low expense. Where contracts are complete, the argument for black letter adjudication is strong. Bernstein’s theory speculating that transactors differentiate between RPNs and EGNs surely has some validity in the context of frequent certain transactions among insular groups. However, where the transactional attributes differ, particularly with regard to those variables that increase the cost of contracting, it is by no means clear that formal methods of interpretation suit these relatively incomplete contracts.

B. The Theory of the New Formalism

A group of theorists have sought to justify the New Formalism through an analysis of the potential of more formal contract interpretation to enhance the joint surplus, and hence the efficiency, of contracts. A primary figure in this emerging literature is Omri Ben-Shahar, who has authored two important articles in this area. Alan Schwartz and Robert Scott also have authored a foundational work on this topic.62

Ben-Shahar’s, The Erosion of Rights by Past Breach, a more theoretical piece, analyzes the countervailing effects of erosion doctrines, such as adverse possession, laches, and course of performance.63 Ben-Shahar demonstrates that, under certain assumptions, the effect of an

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62 See Alan Schwartz and Robert Scott, supra note 13.
63 Omri Ben-Shahar, Erosion of Rights by Past Breach, 1 Am. L. & Econ. Rev. 190 (1999).
erosion doctrine is exactly cancelled out by the attendant effect on the credibility of a threat to sue. This claim is tantamount to saying that the scope of an erosion doctrine is irrelevant because, no matter the circumstances, the credibility of the threat to sue will increase or decrease at a level that exactly matches the scope of the erosion doctrine. So, for example, an increase in the ability for a buyer to successfully claim that a seller has waived its rights under a contract will result in a proportional increase in the seller’s ability to credibly threaten a lawsuit. Ben-Shahar’s aim, however, is not to argue that erosion doctrines are irrelevant. Rather, his aim is to place the focus on the way transaction costs affect erosion doctrines.

In an informal exposition of his claim, Ben-Shahar compares a “fixed rights” regime, where rights do not erode, to an “eroding rights” regime, where rights can erode under certain conditions. In the examples of adverse possession and laches, rights erode through the passage of time. Under the doctrine of course of performance, a right can erode when one party allows the other party to act in violation of a contract without objection or penalty; so, if a buyer and seller agree to use unofficial weights to verify quantities despite a contract clause that provides for official weights, that behavior can erode the ability to enforce the contractual right. Ben-Shahar shows that when enforcement costs are the same, the values of exchange are exactly equal in both a fixed rights regime—which would not allow practice to erode contract rights—and in an erosion regime that allows practice to alter contractual rights. Put another way, the social surplus from exchange is invariant to erosion rules as long as enforcement costs are the same across these rules.

To demonstrate this concept, Ben-Shahar develops a two-period contract delivery model that contrasts behavior under a fixed-rights regime and behavior under an erosion regime. In the fixed-rights example, he shows that an opportunistic promisor will make a delivery equal to the contracted for value minus the cost of enforcement. While in an erosion-rights regime the promisee will require a higher value of delivery in the first round of the exchange due to the fear that refusing to enforce his right will permit the promisor to deliver a lesser amount in the second round. Ben-Shahar, however, shows that the total value of the period one and period

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64 Id. at 193-94.
65 Id. at 207.
66 In his example he sets the contracted delivery at one-hundred and the cost of enforcement at thirty. In this situation an opportunistic promisor will deliver seventy to the promisee because the promisee has no incentive to initiate suit under these circumstances. Id. at 203-04.
two deliveries is the same under both regimes. Ben-Shahar then demonstrates that this irrelevance effect holds under different types of erosion rules, under multi-period exchanges, and when litigation costs differ between parties.

Ben-Shahar notes that while erosion regimes are irrelevant under an assumption of zero transaction costs, in reality transaction costs are never zero. He analogizes to the Coase Theorem in pointing out that his irrelevance theorem demonstrates that transaction costs determine the optimality of erosion doctrines. He speculates that different erosion regimes could have varying endogenous effects on litigation costs. For example, one may be able to economize on litigation costs by initiating a consolidated case for multiple violations in a fixed rights regime, whereas an eroding rights regime may require discrete cases for every violation because one unlitigated claim could be sufficient to destroy the ability to enforce a contractual right. In another example, which bears on the formalism/contextualism question, different erosion rules may impose vastly different monitoring costs on transactions. The danger of high monitoring costs is particularly acute with erosion rules such as course of performance. Because accepting non-conforming performance without objection may erode the ability to enforce a contractual right, this erosion rule may significantly burden an organization by imposing the large monitoring costs that are necessary to ensure compliance with the written terms of a contract.

In *The Tentative Case Against Flexibility*, Ben-Shahar develops his irrelevance insight. He critiques the theoretical assertions of Bernstein and also explores the pragmatic implications of his theory for the contextual rules of the UCC. For the purposes of exposition, Ben-Shahar begins with the assumption that the UCC often permits past practice to alter explicit contract terms through rules such as the parol evidence rule, course of

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67 These are the details of Ben-Shahar’s example: a promisee contracts for two periods of delivery of one-hundred from a promisor. Under the fixed rights regime the promisor is held to a delivery of one-hundred and under an erosion rights regime the promisor must deliver the value delivered in the previous round, provided that the promisee did not enforce the stipulated value of one-hundred. In the fixed rights regime an opportunistic promisor will deliver seventy, the lowest amount he can deliver without inducing enforcement by the promisee (see previous footnote for a more complete explanation of this phenomenon). In an erosion rights regime the promisor will deliver eighty-five in the first round, which becomes the course of performance. In the second round the promisor will deliver fifty-five, which is the course of performance minus the cost of enforcement. In both cases the sum total of the exchange is one-hundred-and-forty.

68 *Id.* at 208-10.

69 *Id.* at 210-12.

70 *Id.* at 212-14.

71 *Id.* at 216.
performance, and course of dealing. These erosion doctrines can lead to more rigid behavior by contractors, because, he speculates, one party may be amenable to a one-time price adjustment, but will refuse to change the contract price for fear that an alteration would be binding on future conduct. Ben-Shahar then applies his irrelevance doctrine to these rules and argues that while more flexible rules can lead to more rigid behavior, the underlying value of a contract is the same under rules that provide for different levels of flexibility. He uses this insight to argue that the framers of the UCC ignored the rigidity effect while also maintaining that Bernstein ignores that the contextual rules of the UCC can promote welfare-enhancing change by accommodating the dynamic needs of transactors.

This irrelevance proposition, however, cannot account for the preferences that many transactors have for certain terms that often appear in real-world contracts. For example, Ben-Shahar notes that the presence of no-waiver clauses does not make much sense if, as he assumes, courts will ignore such a clause when interpreting a contract under the UCC. If courts will not respect such clauses, why would parties waste the resources necessary to draft and bargain over such terms? Ben-Shahar’s answer is that ancillary costs associated with different rules will make some rules more preferable than others.

Ben-Shahar’s analysis of these ancillary costs begins with the possible economization of litigation expenses in a non-erosion regime. Under a non-erosion rule one can let violations of explicit contract terms accrue and then bring one suit to enforce the contractual right, but under an erosion rule one may need to bring a separate suit for every deviation from the explicit contractual terms. Ben-Shahar notes, however, that under most versions of the UCC one need not initiate a full-fledged lawsuit to prevent erosion of a given right. Instead, a party can merely register a complaint about the performance, which is far cheaper than initiating a lawsuit over every instance of behavior that deviates from the explicit terms of a contract. Given the potential for cheap protest, Ben-Shahar does not make an argument either way with respect to retrospective suits. His conclusion, which seems appropriate, is that the enforcement costs under the UCC are not high enough to discredit the flexible course of performance and waiver provisions.

73 Id. at 802.
74 Id. at 795.
75 Id. at 806.
76 Id. at 809.
Like Bernstein, Ben-Shahar also identifies potentially high monitoring costs as a potential source of waste under flexible rules.\(^\text{77}\) For example, if it is difficult for a buyer to detect whether a given set of goods or services is conforming, flexible rules may heighten the rigidity effect. This increase in rigidity would result from the fear of allowing a contractual right to erode if the goods are actually nonconforming. This fear—at least under the strong form of the rule that requires a lawsuit to preserve contractual rights—would lead to an increased propensity to sue in order to keep the right from eroding. The problem of high monitoring costs is particularly acute in the context of course of performance rules. The prospect of losing a contractual right due to acceptance of non-conforming performance puts a buyer to the choice of investing in monitoring costs to ensure conforming tender or investing in litigation to keep contractual rights from eroding. For a large organization involved in many transactions, the cost of monitoring may be quite large, especially in the face of a very flexible rule that erodes a contractual right when there is one instance of accepting non-conforming tender. Such an organization may be better served by developing a reputation for pursuing litigation when performance may not be conforming rather than paying the monitoring costs necessary to properly protest any case of non-conforming tender. It is important, however, to remember that the increase in the rigidity effect will largely be a function of how easily a rule permits waiver, course of performance, or any similar rule to abrogate a contractual right based on contrary conduct.

Ben-Shahar also identifies three other factors that, all other things being equal, may undermine arguments for flexible erosion rules. He first argues that random errors in adjudication will be more costly under erosion regimes than under non-erosion regimes. The basis for this argument is quite simple—under a non-erosion regime a court need only make factual determinations about the “the magnitude of breach or to aggregate the cumulative cost of a sequence of breaches.”\(^\text{78}\) Alternatively, under an erosion regime a court must make legal determinations in addition to the factual determinations required under a non-erosion regime. These legal determinations include the degree to which non-conforming performance erodes the right to enforce the written contract. An error in such a legal determination could have costly consequences for a party. If an error results in the unexpected erosion of a contractual right, there is a potentially substantial cost to erosion regimes because they can destroy or undermine highly valued rights.

These points about adjudication errors are important, but there are at least two rejoinders to this claim. First, this effect is not an inherent liability

\(^{77}\) Id. at 811-12.  
\(^{78}\) Id. at 814.
of erosion rules, but rather is a secondary effect of an imprecise legal system. In any system of adjudication some amount of error is unavoidable, but insofar as a legal system minimizes inaccuracy the relative costs imposed by the imprecise application of erosion rules may not be substantial. Second, as with the case of monitoring costs, the case against flexible rules based on errors in adjudication depends on how flexible the rule is. Under an extreme erosion rule that erodes rights when there are only a small number of non-conforming tenders, the potential waste from random errors in judgment is high. The UCC, however, places a priority on the express terms of the agreement and uses course of performance primarily as an aid to interpretation. While some claim that courts are too willing to overlook express language, the text of the UCC contains a minimal erosion rule, which means that relatively small random errors will only make large legal differences at the margin.

If, for example, a firm repeatedly accepts non-conforming tender, a court may erroneously construe this behavior as a pattern and choose to abrogate the firm’s contractual rights. Where, however, there are only a small number of isolated incidents of the firm accepting non-conforming tender, it would take a very large error for there to be any erosion of rights when a rule requires a discernable pattern of behavior. In contrast, the cost associated with errors under a formalistic, non-erosion regime will always be substantial. If a court finds that a particular performance is not conforming then the non-conforming party is in breach of the written contract. For a court system prone to error, under a non-erosion regime courts will sometimes find a party in breach even when they adhered to the terms of a contract. In comparison to a contextual rule that requires a clear pattern of behavior before a right erodes, it is by no means clear that a non-erosion rule is less costly when the legal system is prone to error.

The second factor that Ben-Shahar points to as favoring formal rules is the differing cost of breach under formal and flexible regimes. He argues

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79 Appellate courts have the potential to increase accuracy, and hence diminish the costs imposed by the imprecise application of erosion rules, but the need for appellate courts to play this role may drive up the costs of litigation associated with erosion regimes.

80 See U.C.C. § 2-108(2) (emphasis added):
“The express terms of the agreement and any such course of performance, as well as any course of dealing and usage of trade, shall be construed whenever reasonable as consistent with each other; but when such construction is unreasonable, express terms shall control course of performance and course of performance shall control both course of dealing and usage of trade.”

81 See, e.g. Schwartz and Scott, supra note 13, at 585-603 (discussing cases where courts disregard express contractual language in favor of UCC defaults), JOHN J. WHITE & ROBERT S. SUMMERS, UNIFORM COMMERCIAL CODE 38 (4th ed., 1995) (“[I]f, in light of a ‘relevant’ course of performance, either waiver or a modification … is thus shown, courts sometimes say that course of performance ‘controls’ and thus alters the express terms.”).
that formal rules may promote more flexibility in commercial relationships because transactors know that they are not giving up any contractual rights when they accept non-conforming performance—an effect that keeps the cost of breach low. Supposing that the cost of accepting non-conforming performance is negligible, Ben-Shahar argues that under a formal regime, transactors should not be concerned about non-conforming tender because they do not lose any contractual rights through acceptance. Under erosion rules, in contrast, transactors may be more vigilant about requiring to-the-letter performance out of fear of losing their contractual rights. While an individual instance of non-conforming tender may only impose negligible costs, the accelerated loss of the contractual right that attaches to this acceptance may impose a much more substantial cost.

The third factor discussed by Ben-Shahar incorporates reliance concerns into the cost of breach. Under an erosion regime a transactor can, somewhat comfortably, rely on a promisee’s acceptance of non-conforming tender. If the promisee’s acceptance becomes regular enough to abrogate the right to enforce the written contract, then a promisor need not worry about being in breach as she continues her non-conforming performance. Alternatively, under a formal regime a promisor can never rely on the acceptance of non-conforming tender because a promisee can always claim breach.82

Comfortable reliance, Ben-Shahar notes, is one of the more compelling rationales for flexible erosion regimes. Ben-Shahar does, however, register two objections to this reasoning. First, he contends that erosion rules can induce reliance on non-conforming practices that may not otherwise exist under more formal rules. He writes, “while the need to accommodate actions made in reliance on a conflicting practice is one of the principal reasons to prefer a flexible legal regime over a rigid one, the mere implementation of such a flexible regime gives rise to reliance actions that might otherwise not take place.”83 It is not clear, however, why this possibility should be considered troubling. If a promisee acquiesces to non-conforming performance with the full knowledge that she is giving up the underlying contractual right, there is no prima facie reason to suppose that this action creates an efficiency loss. This particular argument appears to be based on an aesthetic objection against contextual rules rather than an instrumental rationale in favor of more formal regimes.

Ben-Shahar concedes that reliance may not solely be the product of rules that permit for erosion. Instead, “[a] myopic party may rely on a conflicting practice, such as price reduction or late tender, not for the purpose of modifying the contract prospectively in a manner favorable to

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82 This analysis obviously ignores statute of limitations concerns.
83 Id. at 817.
herself, but out of sincere belief that the practice reflects a status quo."\(^{84}\)
Ben-Shahar then argues that this reliance should only be promoted if it is wealth enhancing rather than merely value transferring. This statement is correct; however, he does not offer any analysis to suggest one way or the other if such reliance is likely to result only in rent-seeking. Moreover, the use of the word “myopic” suggests a larger issue. The implication would seem to be that if transactors were more far-sighted they would be reticent to permit waiver or reliance. This position, however, does not seem to acknowledge legitimate uncertainty as to the terms of an agreement.\(^ {85}\)
A review of contract disputes shows that large gaps, and hence uncertainty as to contractual rights, can often exist with respect to such basic terms as price and quantity. The next section argues that the fact that contracts have gaps that would be costly to fill has important consequences for the desirability of formal versus contextual regimes of interpretation.

Scott and Schwartz have also developed an important theoretical defense of formal contract interpretation. Though their wide ranging theory would require much space to explain in detail, it is worth noting several of the important points they make about the likely preferences of commercial transactors. First, Schwartz and Scott argue forcefully against the application of mandatory rules such as prohibitions against penalties, required acceptance of substantial performance, and an inability to ban contract modifications when parties have expressly contracted around these rules.\(^ {86}\) This point does not conflict with the theory I articulate in this article because where the costs of contracting justify the inclusion of an express term in a contract, it is likely that this term enhances the expected surplus of the exchange and, thus, should be enforced absent a compelling reason otherwise.\(^ {87}\)

Second, Schwartz and Scott contend that commercial parties are likely to prefer formal interpretation because, as long as errors have a mean of zero (meaning that courts get the right answer on average), contextual interpretation tends to increase dispute resolution costs without a corresponding benefit.\(^ {88}\) This is an important observation, but much

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\(^{84}\) *Id.*

\(^{85}\) In high certainty contracts—such as the NGFA examples provided by Bernstein—there is an understandable reticence to be governed by contextual rules. In cases of low certainty contracts, however, the transactors may learn more about the nature of the agreement as performance takes place. Some have argued that tribunals that acknowledge the dynamic nature of the contract may be desirable for this reason. *Cf.* Melvin A. Eisenberg, *The Emergence of Dynamic Contract Law*, 88 CAL. L. REV. 1743 (2000) (making normative and positive claims about the appeal of dynamic contract law).


\(^{87}\) See *infra* Sec. III.

\(^{88}\) See Schwartz & Scott, *supra* note 13, at 573-83 (noting that varying the assumptions
depends on the assumption that courts will get things right on average. Insofar as this is not the case, one should expect to see a preference by at least some parties for more contextual types of interpretation if contextual interpretation produces accuracy in a manner that enhances surplus. It is also worth noting that parties often devote immense resources to litigation, which implies that parties may value accuracy more than Schwartz and Scott suggest.

Finally, the actual dispute resolution choices of some transactors seem at odds with the hypothesis of Schwartz and Scott. Some transactors undoubtedly prefer highly formal types of interpretation, and they likely do so for the precise reasons that Schwartz and Scott suggest—but by no means do all of them exhibit this preference. The apparent desire of some transactors to have their contracts governed by contextual rules suggests that the theory of the New Formalism has yet to provide a global explanation for dispute resolution preferences. The ensuing section speculates about some of the reasons why this variation may exist.

IV. TRANSACTIONAL ATTRIBUTES, DISPUTE RESOLUTION, AND A MODEL OF GAPPING

This section develops a framework for analyzing how the attributes of a transaction, which were identified in Section II, may affect the choice of how much to invest in contract drafting. The framework begins with a model of the marginal cost of additional investment in drafting before focusing on how individual attributes would be likely to affect the developed model. This section concludes with a series of applied examples from industries that appear to prefer more contextual interpretation for the reasons suggested by the model.

A. Contracting Costs and the Dispute Resolution Decision

In the traditional transaction-cost model, contractual risk increases the probability of vertical integration. The rationale for this prediction is that vertical integration attenuates the risk of some transactions because...
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bringing the transaction within an organization eliminates the possibility of contractual opportunism and attenuates the risk associated with bounded rationality. Vertical integration is, however, a rather costly solution to the problem of contractual risk. If the amount at stake and the risk associated with a particular transaction do not justify the cost associated with providing a good or service in-house, transactors will have to use a contractual mechanism to support the exchange. The contracting costs that can create the pressure to vertically integrate are also a factor in the decision concerning the interpretive regime that transactors use. The New Institutional Economics literature tends to focus on the organizational aspects of contracting decisions, while the economic theory literature focuses on the information, bargaining, and remedy problems presented by contracting decisions. There have, however, been some recent investigations by economists into how drafting costs can affect contractual completeness. These analyses tend to focus on how exogenous factors impact completeness without a focus on the interpretive preferences these exogenous factors may support.

The choice of whether or not to invest additional resources in ex ante contracting is relatively simple. One should continue to invest in contracting if the cost of doing so is less than or equal to the expected costs and benefits of the marginal cost of the investment. There are two types of costs and benefits to a contract term. The first type of benefit is the surplus that the term creates for the parties to the contract. For example, a term

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93 Investing in contracting can take a number of forms. It can mean additional negotiations with parties to fill in gaps, adding additional terms, modifying existing terms and the like. It is an open question whether the length of contracts is a useful proxy for the degree of contractual investment. Cf. Robert D. Cooter and Thomas Ginsburg, *Leximetrics: Why the Same Laws are Longer in Some Countries than Others*, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=456520.

94 Clayton Gillette has suggested that the costs of contracting bear on the analysis of interpretive preferences. See Clayton P. Gillette, *The Law Merchant in the Modern Age: Institutional Design and International Usages under the CISG*, 5 CHI. J. INTL. L. 157 (2004). He calls the expense of drafting more complete contracts “specification costs” and argues that there may be situations where these specification costs can outweigh the error and adjudication costs imposed by more contextual regimes. Id. at 164. He does not, however, use a formal model or specify how attributes of transactions may affect these relative costs. For further discussion of Gillette’s work see infra notes 151 & 167.
specifying that the promisor will expend a certain level of effort can create added value in the contract to the promissee. Likewise, a deposit clause can serve as a means for a promisor to recoup asset-specific investments. The second type of costs or benefits concerns the marginal effect of a contract term on potential disputes. A potential dispute involves the possible liability or award and the legal costs associated with the dispute multiplied by the probability of a dispute. For example, a term that specifies the meaning of a particular trade usage may decrease the probability of a dispute.

The simple equation below depicts these elements of the contractual completeness decision. Assume a bilateral contracting situation in a competitive market where the goals of the parties are to minimize contracting costs while maximizing joint surplus and minimizing dispute resolution costs. In addition, assume that the parties, by pursuing their own interests, will maximize the overall surplus from the transaction.95 Let

\[
\begin{align*}
 w &= \text{cost per unit of contracting} \\
 x &= \text{quantity of contracting units} \\
 s(x) &= \text{expected surplus of as a function of contractual completeness,} \\
 &\quad \text{assume}: s'(x) > 0, s''(x) < 0 \\
 p(x) &= \text{probability of a dispute given x units} \\
 c &= \text{cost of resolving the dispute}
\end{align*}
\]

\[
(1) \quad wx = s(x) - p(x)c \\
(2) \quad w = s'(x) - p'(x)c
\]

Equation (1) specifies the costs and benefits associated with deciding how complete a contract should be.96 The \( wx \) term is a measure of how much parties invest in the contracting decision. The right hand side of the equation breaks down the costs and benefits associated with the

95 This assumption rules out a situation, such as that posited by Ian Ayres and Robert Gertner, where a party can strategically withhold information to increase her share of the pie at the expense of the overall size of the pie. See Ian Ayres & Robert Gertner, Filling Gaps in Incomplete Contracts: An Economic Theory of Default, 99 YALE L.J. 87, 94 (1989).

96 Richard Posner develops a somewhat similar model in his investigation of the economics of contract interpretation. His model, which focuses on the overall social efficiency of interpretive choices rather than on variation in interpretive preferences, includes the cost to the judicial system of litigating a dispute and an error term. See Richard A. Posner, The Law and Economics of Contract Interpretation, 83 TEX. L. REV. 1581 (2005). The cost to the judicial system is not relevant to the model developed here because it is not a consideration of the parties. The model here incorporates the error term into the expected surplus function.
completeness of the contract. The \( s(x) \) term measures the surplus from the contract as a function of the number of contracting units. The \( p(x)c \) term measures the expected cost of litigation as a function of contractual completeness. Note that this term does not include a damage award because the damage award is merely a transfer between the parties.\(^{97}\) Equation (2) is the derivative of equation (1) with respect to \( x \). Equation (2) demonstrates that whenever the cost of negotiating the marginal term in a contract is more than the expected surplus from the transaction and more than the marginal effect of the transaction on liability, one should not expect to see the term.\(^{98}\) In contrast, whenever the cost of negotiating the marginal term is less than or equal to the right hand side of the equation, one should expect to observe the term in the contract. The following section uses this simple model of contractual completeness to evaluate the impact of frequency, uncertainty, and insularity on contracting choices.

1. Frequency

The frequency variable has a relatively straightforward effect on the cost of contracting. One can expect that as a certain type of transaction increases in frequency the marginal cost of contracting (\( w \) in the equation above) for that transaction decreases. There are at least two reasons for these decreasing marginal costs. First, the ability to standardize contracts through forms dramatically reduces the marginal cost of drafting contracts. This feature of contracting resembles the economics of intellectual property insofar as there is a large up front cost in drafting the initial contract, but the cost of replicating that contract is relatively low. Second, if transactors learn about the contours of the transaction as time goes on, then one would expect the cost of refining contracts to decrease. This effect is not as dramatic as the standardization effect, but nevertheless this learning effect should contribute to a decreasing marginal cost of contracting even after realizing the economies from standardization.

Figure 1 is a simple representation of the marginal costs of contracting as the frequency of a given transaction increases. The cost curve rises quite quickly at first. The initial steepness reflects the high cost of writing a standardized contract for a given transaction. Yet after incurring the initial high costs, the low cost of reproducing the language sharply

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\(^{97}\) Omitting the damage term makes sense where parties have similar expectations about the probability of being sued or suing.

\(^{98}\) The surplus term assumes that whenever a term creates a net gain that the parties will realize this gain. In an actual bargaining context one assumes that the most common mechanism for ensuring that parties will realize the complete surplus from a bargain is by adjusting the price as contract terms change.
reduces the marginal cost of writing an additional contract. The marginal cost still decreases, because as the transactors learn more about the contract, they can refine the standardized language to better suit the risks attendant to the transaction. The gentle decrease in slope after the steep rise in the cost curve reflects this learning effect.

Figure 1

Given that frequency tends to allow \( w \) to approach zero,\(^9^9\) what then will be the effect of different types of dispute resolution on decisions about contractual completeness? In the case of industry-specific arbitration, where dispute resolution costs tend to be low and damages tend to be low with low variance, one should expect to see any contract term that creates even a moderate amount of surplus. The combination of low contracting costs and the low cost of industry-specific arbitration create the possibility of writing nearly complete contracts. In an almost complete contract, nearly all terms that create a benefit to the parties appear in the contract because the cost per unit of contracting and the marginal cost of resolving the dispute—the \( w \) and \( c \) terms, respectively—approach zero. This dynamic suggests that where parties are able to write nearly complete contracts, one should expect to see a preference for formal interpretation.

Bernstein notices the high frequency of NGFA and cotton contracts, but does not attribute the preference for formalism to this feature of the

\(^9^9\) It is also worth noting that contracting costs are not always, or even often, symmetrical for parties. An example would be in the form contact context. For the form-contract writer it is very easy to add an additional term at a low marginal cost. For the form-contract taker it would be very difficult to negotiate a desired term. Rather the best option for the contract taker is to search for a higher price substitute good or service that comes with a contract with more favorable terms.
transactions. Instead, she accounts for the disjunction of casual transactor behavior and the strict contractual rules and interpretation among grain traders by positing that in end game situations, such as litigation, traders derive surplus from enforcing the strict rules in the contract. Bernstein uses this insight to argue against the contextual provisions in the UCC. She does not, however, acknowledge the possibility of variance among transactors concerning the impact of the cost of contracting on interpretive preferences. Grain traders engage in a high number of transactions and use a highly standardized and much-litigated contract to carry out these transactions. These frequent transactions create a large economy of scale. These economies of scale mean that traders can add or subtract contract terms at very low marginal cost because the contract is used so frequently. Given these very low costs of contracting one should expect the contracts such as those used by grain traders to be nearly complete.

In contrast, infrequent contracting likely means that \( w \) (the cost per unit of contracting) will be higher relative to frequent transactions. A higher \( w \) has a number of consequences with respect to contracting and dispute resolution distinctions. Relative to transactions that have a low value of \( w \), contracts governing infrequent transactions are likely to be more incomplete. This relative incompleteness follows from the higher cost of negotiating additional terms. Unlike frequent transactions, where transactors should be able to extract most of the surplus from a transaction, the higher cost of transacting means that transactors will have to leave out terms that would otherwise create a surplus because it is too expensive to negotiate these terms.

All other things being equal, transactors who face large gaps in contracts because of the high cost of filling those gaps may opt for more contextual dispute resolution regimes as a more effective choice for addressing contractual risk. Contextual interpretation may appeal because it provides a reasonably accurate mechanism for filling in large gaps through the use of industry norms and other sources of extrinsic evidence. Relative to the high cost that would be necessary to even attempt drafting the missing terms of a contract that governs an infrequent transaction, transactors may be content to leave the gaps in place and take their chances with contextual interpretation regimes.

100 See Bernstein, supra note 9, at 1817 (noting that grain companies employ hundreds of merchandisers who “enter into numerous contracts each day”); Bernstein, supra note 10 at 1755 (discussing the “high velocity” of transactions in the cotton industry).

101 See id. at 1802.

102 See id. at 1816-17.

103 Recall, however, that transactions that are infrequent on the global and firm-specific dimensions may not create ideal conditions for the evolution of efficient norms.
One might argue that a choice between formal and contextual interpretive regimes is of diminished consequence when there are substantial gaps in a contract because the gap-filling task is similar regardless of regime. There are, however, substantial reasons to believe that the degree of formality present in a group of default rules, and the degree to which a given set of judges and arbitrators are inclined to interpret contracts formally or contextually, will have important consequences for transactors.

In more formal regimes, where judges and arbitrators are likely to put more effort into discerning the meaning of contract terms before turning to extrinsic evidence, parties will have an incentive to devote more resources to contract drafting because it is more likely that the terms of the contract will have an effect on the outcome of any litigation that arises. The interpretive regime may also have significant consequences for the ex post behavior of parties. Leaving a contractual gap when any litigation will take place in a more contextual regime may provide a stronger assurance that parties will adhere to industry norms and will generally comport themselves in a good faith manner, lest evidence to the contrary be admitted in a dispute.

Finally, several scholars have identified important effects that default rules can have on behavior and efficiency. Schwartz and Scott note that efficient default rules are desirable because the drafting costs that would otherwise be necessary to agree to these rules may preclude their inclusion in a written contract. Schwartz and Scott also assert that the effect of inefficient defaults can be heightened when judicial action makes these defaults “sticky,” in the sense that courts can make it difficult to contract around defaults by requiring extremely precise language to allow parties to discard a default rule. Russell Korobkin has shown that the “endowment effect” created by default rules can affect the willingness-to-pay that first-year law students assign to the value of a given rule. Ben-Shahar and John Pottow have argued that default rules may stick, among other reasons, because deviating from them may send undesirable signals to counter-parties. These potential effects of default rules may provide

\[104\text{ See Schwartz & Scott, supra note 13, at 596 (“The justification for a default rule is that it does for parties what they would have done for themselves had their contracting costs been lower.”).}\\\]
\[105\text{ See id.; n. 20 (citing the intense lobbying by firms regarding proposed changes to Article 2 as evidence of that firms are aware of this stickiness); see also Robert E. Scott The Rise and Fall of Article 2, 62 L.A. L. REV. 1009, 1049-53 (2002).}\\\]
additional reasons for transactors to prefer contextual defaults when gaps would be particularly costly to fill.

2. Uncertainty

The initial review of uncertainty suggested that two types of uncertainty are likely to have a significant impact on the cost of contracting: predictive uncertainty and linguistic uncertainty. Recall that predictive uncertainty refers to the difficulty in foreseeing the contingencies that could lead the transaction awry. Predictive uncertainty may be, at least to some degree, a function of frequency. At low levels of frequency a transaction with a high level of predictive uncertainty could create high contracting costs due to the large number of unknown contingencies that may make it difficult to anticipate potential contractual problems. At a high frequency of transactions, the contracting cost of a high degree of predictive uncertainty should diminish because the larger number of transactions allows parties to spread the risk of contingencies across the transactions. Figure 2 has a curve that depicts such an effect. This curve reflects initially-steep increases in the cost of contracting that diminish at higher levels of frequency.

Linguistic uncertainty is a more intractable problem than predictive uncertainty. In general, it is unlikely that a transaction that is difficult to describe in writing will become substantially easier to describe as the frequency of the transaction increases. Consequently, the marginal cost of contracting where there is linguistic uncertainty may be almost constant. One might find a small decrease in the marginal cost of contracting as a result of a learning effect; but, there is little reason to believe that this effect could do that much to minimize a problem that reflects a fundamental difficulty with language. Figure 2 also depicts the contracting cost curve associated with high linguistic uncertainty. Unlike predictive uncertainty, there is only a slight economy of scale associated with linguistic uncertainty. As a result the cost curve rises at an almost constant rate with a slight decrease in the marginal cost to account for the learning effect that may come with a high frequency of transactions.
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Predictive uncertainty presents a rather straightforward issue of risk management. To overcome predictive uncertainty, parties can include terms that specify an outcome should performance become prohibitively costly. For example, parties can cheaply add escalator, cost-plus, or commercial impracticability clauses to the contract if there is sufficient risk inherent in the transaction. Negotiating this term should not be all that expensive because non-performance for reasons related to cost should not be all that difficult to demonstrate. The benefits, in terms of surplus and a decrease in the chance of a dispute, are likely to be substantial from such a term. As a result, the \( w \) term in situations of predictive uncertainty is likely to be low enough to justify expending the costs necessary to negotiate such a term. Moreover, as Figure 2 demonstrates, at a high frequency of transactions the marginal cost per transaction of adding these risk-spreading clauses declines. Consequently, it is more likely that risk-spreading clauses will appear at high frequencies because it is cost effective to include these clauses.

Linguistic uncertainty, where it is difficult to reduce the potential problem to clear language, is a more difficult problem. Where terms are difficult to memorialize, it will be more expensive for parties to properly characterize their intentions. Accurately representing an agreement about a linguistically uncertain term will presumably require more hours of higher quality legal services. The equation above predicts that transactors will only be willing to pay the marginal cost per unit of contracting when the expected surplus and reduced possibility of a dispute justify that cost. If a
term does not provide these benefits, then parties will likely leave a gap in the contract with respect to that term or they will choose not to engage in the transaction. Effective risk management, however, requires providing for contingency planning should a dispute arise concerning the gap, and the type of interpretive regime that parties use can, of course, affect whether or not they decide to leave a gap.

Contrast the NGFA system with adjudication under Article 2 of the UCC. In the NGFA system, according to Bernstein, the procedure for filling gaps is as follows: arbitrators first look to the explicit language of the contract, then to the trade rules of NGFA, and only then, with apparent reticence, is there an examination of extrinsic evidence of trade practices. In adjudication under the UCC, judges will first look to the explicit language of the contract before turning to the default rules specified in Article 2. As a generalization, these default rules often look to contextual evidence to fill in gaps such as course of performance, trade usage, and industry practices.

There are at least two important differences in these approaches. First, there is the intermediate set of trade rules in the NGFA arbitration system that do not exist under Article 2. The existence of a background set of trade rules may affect the gap-filling decisions of parties. Grain transactors may feel comfortable not investing large amounts in contracting costs because they know that there are codified rules that will fill in their gaps. In instances of Article 2 adjudication, there may be stronger incentives to invest in gap filling because of the lack of trade rules to fill out vague terms. Second, there may be a different threshold for finding gaps in contracts. Bernstein portrays industry-specific arbitration tribunals as reluctant to find gaps in contracts when there is a contract term that generally speaks to a contested issue. So if arbitrators are less willing to find gaps, there may be less of an incentive to invest in additional contracting costs to fill gaps. Alternatively, in Article 2 adjudication, courts may be more willing to find gaps and thus look to the contextual gap-filling provisions of the UCC.

The well-known case of *Nanakuli Paving & Rock Co. v. Shell Oil Co.* demonstrates the point. In *Nanakuli* an asphalt sales contract stated

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108 Bernstein, *supra* note 9, at 1776-77. Bernstein asserts that if arbitrators exhaust all these sources they will then turn to the UCC or other statutory sources. *But see note 54*, referencing a NGFA decision where arbitrators favor industry custom over a written trade rule.

109 This statement is somewhat of a generalization because Article 2 adjudication takes place in a wide number of jurisdictions, which may have different thresholds for finding a gap.

110 664 F.2d 772 (9th Cir. 1981).
that the price would be the seller’s posted price at the time of delivery.\footnote{Id. at 777.} The buyer claimed that it was a common trade usage, and was the course of performance, to use “price protection,” which is the price at the time when a buyer bids on a project.\footnote{Id.} The court agreed, holding that “the jury could have reasonably construed price protection as consistent with the express term.”\footnote{Id. at 780.} This conclusion—which has some analogues in other decisions—may have been quite a surprise for at least one of the parties.\footnote{See also Allapattah Servs. v. Exxon Corp., 61 F. Supp. 2d 1308 (S.D. Fla. 1999) (overriding a black-letter price term because standards of good faith and commercial reasonableness, as measured by trade norms, were contrary to the term); American Mach. & Tool Co. v. Strite-Anderson Mfg. Co., 353 N.W.2d 592, 597 (Minn. Ct. App. 1984) (“The trend has been for judges, looking beyond written contract terms to reach the ‘true understanding’ of the parties, to extend themselves to reconcile trade usage and course of dealing with seemingly contradictory express terms. They have permitted course of dealing and usage of trade to add terms, cut down on or subtract terms, or lend special meaning to contract language.”).} One can reasonably expect such decisions to drive up the price of contracting—instead of simply incorporating a posted price term, parties knowledgeable of decisions like Nanakuli will have to negotiate explicit terms about whether to use or ignore trade norms such as price protection.\footnote{Schwartz and Scott make a similar point in their discussion of UCC § 2-202 and the related commentary, which require the careful negation of an assumption that prior dealings and trade usage have been incorporated into a contract. See Schwartz and Scott, supra note 13, at 585.}

These additional costs are not necessarily a negative feature of the UCC. As Robert Gertner and Ian Ayres have pointed out, there may be good reasons to include harsh default rules insofar as they spur parties to incorporate explicit language about their intentions.\footnote{See generally, Ayres and Gertner, supra note 95.} Likewise, a low threshold for finding a gap may provide an incentive for parties to write more concrete contracts. The larger point of this study, however, is that different interpretive regimes are appropriate for different types of transactions. Where linguistic uncertainty is low and parties can codify expectations and standards with relative ease, it is understandable that parties will have a strong distaste for dispute resolution systems that are more willing to look outside the terms that the parties favor.\footnote{See Schwartz & Scott, supra note 13, at 592-94 (arguing that reliance on course of performance to interpret contract terms is inappropriate when parties have incurred costs to state expressly that their course of performance should not be relevant).} The use of extrinsic evidence may erode what parties perceive as their bargained-for rights under a contract. For situations where there is high linguistic

\begin{itemize}
\item \footnote{Id. at 777.}
\item \footnote{Id.} Unsurprisingly, there was a substantial difference between the price at the time of bidding and the posted price at the time of delivery.
\item \footnote{Id. at 780.}
\item \footnote{See also Allapattah Servs. v. Exxon Corp., 61 F. Supp. 2d 1308 (S.D. Fla. 1999) (overriding a black-letter price term because standards of good faith and commercial reasonableness, as measured by trade norms, were contrary to the term); American Mach. & Tool Co. v. Strite-Anderson Mfg. Co., 353 N.W.2d 592, 597 (Minn. Ct. App. 1984) (“The trend has been for judges, looking beyond written contract terms to reach the ‘true understanding’ of the parties, to extend themselves to reconcile trade usage and course of dealing with seemingly contradictory express terms. They have permitted course of dealing and usage of trade to add terms, cut down on or subtract terms, or lend special meaning to contract language.”).}
\item \footnote{Schwartz and Scott make a similar point in their discussion of UCC § 2-202 and the related commentary, which require the careful negation of an assumption that prior dealings and trade usage have been incorporated into a contract. See Schwartz and Scott, supra note 13, at 585.}
\item \footnote{See generally, Ayres and Gertner, supra note 95.}
\item \footnote{See Schwartz & Scott, supra note 13, at 592-94 (arguing that reliance on course of performance to interpret contract terms is inappropriate when parties have incurred costs to state expressly that their course of performance should not be relevant).}
\end{itemize}
uncertainty, however, this risk of erosion is less acute because the larger gaps in the contract create more ambiguity about the underlying contractual rights at issue. Contracts that contain contextual terms and dispute resolution forums that provide contextual default rules may provide an effective risk management solution for transactors who face high costs filling gaps. This situation is particularly true when less contextually oriented regimes provide for harsh results, such as rescission, in the presence of a contractual gap and a prohibition on extrinsic evidence.

3. Insularity

One of the great insights of the literature on law and social norms is that belief systems and community norms can provide powerful behavioral incentives. This finding undoubtedly applies in the context of transacting communities. Where a community is insular, there is likely to be a greater consensus concerning what is and what is not a proper course of behavior. Those who deviate from the consensus norms risk ostracism and harm to their reputations. And, of course, in a more insular community the information about the reputations of others will travel more quickly and is likely to lead to stronger forms of sanction. These features of insular transacting communities have important ramifications for decisions about contracting costs. In particular, increased insularity is likely to decrease the importance of written contracts in governing transactions. The reason for this decreased importance is that high levels of insularity mean that extra-legal regulation of untrustworthy transactors is likely to be inexpensive relative to more formal legal information. The prospect of cheap extra-legal enforcement mechanisms provides a substantial disincentive to invest in the contract drafting process. Put in terms of the equation developed above, investing in filling in contractual gaps provides too small a relative decrease in the $p'(x)c$ term (the marginal cost of litigation as a function of contractual completeness) to justify substantial use of formal dispute resolution.

Contrasting Bernstein’s studies of the diamond, grain, and cotton industries provides some support for this claim. Assuming that insularity is a function of group size and the degree of cultural homogeneity, one would expect the diamond industry, which is small and has a very high degree of cultural homogeneity, to have a less developed and less utilized dispute resolution system relative to the less insular grain and cotton industries.

Indeed, Bernstein reports that some diamond transactions do not even involve written contracts and that most transactors think of bills of sale as accounting devices rather than contracts. In the small number of disputes that diamond arbitrators hear, they apply rules based on trade usage and custom. When the skeletal contracts and trade rules leave gaps, the arbitrators take a decidedly ad hoc approach. Bernstein explains the diamond industry’s preference for arbitration and reputation-based contracting as a consequence of the inadequacies of general courts to provide truly compensatory damages. The model above suggests that rather than avoiding the damages used by general courts, diamond traders are simply economizing on contracting costs by using gap-laden contracts.

The grain and cotton industries, which are larger and less homogeneous than the diamond industry, appear to rely more heavily on written contracts. NGFA is quite large, with membership of over 1,000 firms that control over 5,000 facilities at varying levels within the grain industry. Likewise, Bernstein’s study of the market for cotton claims that the entire American cotton industry more or less operates under a private legal system. The wider scope of the grain and cotton industries relative to the diamond industry may explain the stronger reliance on structured arbitration systems. Compared to the diamond industry, both NGFA and the cotton industry have a more thoroughly developed system of trade rules and arbitration and appear to generate more cases.

Consistent with the contracting investment model developed above, one can explain the increased reliance on a formal dispute resolution system as a consequence of larger group size and decreased heterogeneity. These features of the grain and cotton industries mean that informal means of governance are less likely to be effective. As a result, the probability of using formal means of dispute resolution increases, which justifies a higher

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119 Bernstein, supra note 42, at 123.
120 Bernstein reports transactors file about 150 cases each year and that roughly 15% of those cases do not settle. Id. at 124.
121 See supra Sec. III(A)(i).
122 Id. at 135-36.
123 To say that these industries rely more on formal contracts does not mean that they rely heavily on these contracts. It is important to remember Stewart Macaulay’s finding that businessmen seldom refer to formal contractual language and have a strong distaste for contract disputes. See Stewart Macaulay, Non-Contractual Relations in Business: A Preliminary Study, 28 AM. SOC. REV. 55 (1963); but see Eric A. Feldman, The Tuna Court: Law and Norms in the World’s Premier Fish Market, 94 CAL. L. REV. 313 (2006) (showing that transactors in Japanese tuna markets submit a substantial number of claims to specialized tuna courts and that the high claim rate does not appear to impair ongoing relationships).
124 See http://www.ngfa.org/ngfaprofile.asp.
125 See Bernstein, supra note 10, at 1724.
investment in ex ante contracting.\textsuperscript{126} At the same time, the high frequency and low uncertainty of the grain and cotton transactions likely create a preference for formal modes of contract interpretation.

A. Applied Examples

Evidence from several industries suggests that the attributes of transactions have an appreciable effect on the desire for more formal or more contextual types of contract interpretation. This section discusses three industries that, unlike those studied by Bernstein, generate gap-laden contracts that parties tend to have interpreted with reference to significant amounts of extrinsic evidence.

1. Mergers and Acquisitions

Merger agreements are one of the more prominent instances of low frequency transactions that involve significant uncertainty that can affect preferences for different modes of contract interpretation. Several factors contribute to this uncertainty. First, the extreme time pressure that is typical to merger deals limits the ability of dealmakers and their attorneys to draft complete contracts. This shortened time frame for ex ante investment in the contract drafting process necessarily limits the amount of time to fill in gaps in the contract. Second, the one-time nature of these transactions means that even where there is time and the incentive to fill these gaps, it is difficult to do so because the parties cannot rely on past experience with this specific transaction to devise precise gap-filling terms. This effect can, of course, be mitigated by the experience that the dealmakers and their attorneys have had with substantially similar merger transactions. But the variation from deal to deal is surely more significant in the transfer of complex business assets than it is in the high-certainty world of commodities transactions.

Though it is difficult to obtain precise numbers, many merger agreements choose Delaware courts as the forum to resolve any disputes; a choice presumably influenced by the substantial experience that Delaware courts have with corporate law. A recent case, \textit{United Rentals, Inc. v. RAM Holdings, Inc. et al.},\textsuperscript{127} encapsulates the drafting problems that can arise with merger transactions and how Delaware courts rely extensively on extrinsic evidence to resolve those problems. The dispute in \textit{United Rentals} involved the proper remedy for the seller after the private equity firm,

\textsuperscript{126} There is obviously still an important role for the spread of reputational information in the grain and cotton industries. This section is only claiming that gossip will play a stronger governance role in more insular industries relative to less insular industries.

\textsuperscript{127} \textit{United Rentals, Inc. v. RAM Holdings, Inc.}, 937 A.2d 810 (Del Ch. 2007).
Cerberus, balked at closing the transaction for the agreed upon price of $34.50 a share. The merger agreement contained a specific performance provision that would be triggered in the event the deal failed to close, but it also contained a clause that specified a termination fee of $100 million as the sole remedy if the deal did not close. After denying the seller’s motion for summary judgment, which itself relied on extrinsic evidence from the drafting of the agreement, the Chancellor held a trial in which extensive testimony was taken from the dealmakers and their attorneys regarding the meaning of the contract. The Chancellor’s opinion examined successive, but unexecuted, drafts of the contract in detail to try and resolve the conflict between the specific performance provision and the termination fee.

Chancellor Chandler ultimately found that evidence from these drafts and testimony as to their meaning was inconclusive. He resolved the case in favor of the buyer using the forthright negotiator principle, which uses a particularly extreme form of extrinsic evidence—namely, one of the party’s subjective understanding of the meaning of the contract.

If the initial commentary is any indication, United Rentals will likely become a rich vein for corporate law scholars to examine issues that arise in mergers. But the case is also relevant to the analysis of interpretive preferences because it is a telling example that not all commercial parties prefer the limitations on extrinsic evidence favored by the New Formalists.

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128 Id. at 815; 827.
129 Id. at 815-17.
130 Id. at 836 (“At trial, both sides attempted to show that the extrinsic evidence led ineluctably to that party’s respective interpretation. This was an exercise in futility.”)
131 Id. at 36-44 (discussing the testimony related to the buyer’s subjective understanding of the contract, evaluating the credibility of this evidence, and finding that the buyer understood the contract not to include the specific performance remedy.)
132 Larry Ribstein reported the case on his blog and argued that the court wanted to signal to similarly situated parties that they need to do a better job of drafting internally consistent contracts. See http://busmovie.typepad.com/ideoblog/2007/12/cerberus-uri-wh.html. (“Chandler’s resolution gives the parties an incentive to clearly communicate their intentions, which is another way to avoid the courts’ involvement in sticky disputes like this.”) Jeffrey Lipshaw responded to Ribstein’s post by emphasizing, as this Article does, that merger agreements are far more complex than simple commodities transactions. See http://www.concurringopinions.com/archives/2007/12/the_cerberus_ca.html (“One of the reasons I love complex acquisition agreements as the subject of contract theory is that, like life, they are incredibly complex. No mere agreement to buy 100 bushels of wheat in thirty days at X dollars per bushel here! No, the agreements attempt to map a highly contingent future, one in which the environment or the businesses can change, financing may not be available, but the company lawsuits can be filed, shareholder actions begun, and so on.”) Steven Davidoff followed with analysis from the perspective of mergers and acquisitions experts, see http://lawprofessors.typepad.com/mergers/2007/12/the-dog-bites-c.html, and Ribstein responded to Lipshaw with a defense of his comments, see
Limits of Contract Law is that formal contract rules, by constraining the ability of a court to take extrinsic evidence, can reduce dispute resolution costs by allowing parties to resolve cases on the basis of limited evidence—i.e., a motion to dismiss rather than summary judgment. 133 United Rentals provides an example where parties chose a forum that was willing not only to entertain a summary judgment motion, but was willing to hold a complete trial to ascertain the meaning of the contract.

The choice of a forum that is so solicitous of contextual evidence provides some support for the argument that parties to transactions with low frequency and high uncertainty may prefer to rely on ex post contextual interpretation rather than exhaustive ex ante investment in contracting to resolve any disputes that arise. Merger transactions may be particularly prone to this reasoning because the added expense of contextual interpretation will typically pale in comparison to the stakes of the transaction. For example, in United Rentals, the difference between the $7 billion purchase price that would have been required by specific performance and the $100 million termination fee surely dwarfed the expenses associated with the summary judgment motions and subsequent trial. Given these stakes, it is understandable that the parties would not want to limit themselves to the language of a contract that was drafted under intense time pressure and, instead, would prefer to introduce the array of contextual evidence that provided insight into the nature of the parties’ agreement.

Some recent empirical work bears on the choice of jurisdiction for mergers and acquisitions. Ted Eisenberg and Geoffrey Miller compiled a database of merger and acquisition contracts filed with the SEC and coded these contracts for a series of variables—state of incorporation and the agreement’s choice of law. 134 The data show a strong relationship between these two variables; and, as one might expect, acquirers incorporated in Delaware tend to choose Delaware law to resolve disputes. 135 When,
however, one controls for state of incorporation, parties appear to shift away from Delaware law in favor of (mostly) California and New York law. While the study is fascinating, it is difficult to make inferences about interpretive preferences from these data. Drawing any conclusions would require knowing how parties perceive California and New York courts on the contextualism-formalism continuum relative to Delaware. We do not have this information, so it would be difficult to attribute much meaning to the relatively infrequent situations where parties that have incorporated in Delaware choose a different state’s law to govern a merger.

Subsequent work by Eisenberg and Miller, however, makes bolder claims about the appeal of New York as a jurisdiction for commercial litigation. Using a sample that extends beyond merger contracts, Eisenberg and Miller show that transactors appear to have a strong preference for choosing New York law even when the parties to the contract have headquarters outside of New York. This preference appears to be particularly strong for companies in California, who opt for New York law at a relatively high rate.

In a follow-up piece, Miller argues that the more formal interpretive approach of New York courts and the more contextual approach of California courts may account for these choices. Miller marshals substantial doctrinal support for this claim, although this review of published cases can only say so much about actual outcomes and can only serve, at best, as an approximation of what parties believe about these courts when they make choice-of-law decisions. Nevertheless, if Miller is correct, it would not be inconsistent with the thesis I articulate here. Parties may choose New York law for transactions that are best suited to formal adjudication and choose California law for contracts where contextual interpretation best serves the needs of the parties.

Indeed, Eisenberg and Miller present evidence that choice-of-law provisions vary substantially across transaction type. So, for example, in a sample of 2,882 contracts, 412 governed mergers, 217 governed credit commitments, 155 governed bond indentures, and 352 governed underwriting. Of the merger contracts, thirty-two percent chose Delaware

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136 Id. at 1989.
138 Id.
139 Id.
141 Id.
law and only seventeen percent chose New York law. In contrast, eighty-nine percent of all bond indenture contracts, forty-eight percent of all credit commitment agreements, and ninety-three percent of underwriting contracts opted for New York law. While these descriptive statistics do not control for state of incorporation, they do suggest that the type of contract at issue can be a factor in deciding the appropriate law to govern a transaction. To the degree that United Rentals is indicative of the place of Delaware courts on the formalist-contextualist continuum, and insofar as the statistics above reflect a choice to choose Delaware law for merger agreements at a higher rather than some other contracts, the data could be read as evidence that parties prefer more contextual approaches for merger transactions.

2. Tailored Software Contracts

The high technology industry presents a highly uncertain contracting environment. Mark Suchman and Mia Cahill argue that the predominant role of Silicon Valley lawyers is to mitigate and suppress this uncertainty by providing gatekeeping, proselytizing, and sorting services to their venture capital clients. These authors also argue that Silicon Valley lawyers can create surplus for their clients by incorporating industry norms into contracts and by trying to get these norms incorporated into national legal standards governing venture capital and technology issues. The authors argue such standardized terms tend to represent the consensus norms of the industry and are set against the backdrop of UCC § 1-205, which encourages tribunals to augment contract interpretation with trade usage. At least some problems in technology contracting involve deep problems with linguistic uncertainty. Drafting contracts to produce tailored pieces of software can pose particularly acute problems of linguistic uncertainty because it can be difficult to reduce the desired performance specifications to effective contractual language. Even with substantial investments in contract drafting, it may not be possible to describe the states of the world that would satisfy conforming tender with a sufficient degree of accuracy. In this sort of situation, parties may prefer an ex post application of industry standards.

142 See Eisenberg & Miller, supra note 140, at 137.
143 Id.
145 Id. at 703-08.
146 Id. at 705. See also U.C.C § 1-205 (3)(“A course of dealing between parties and any usage of trade in the vocation or trade in which they are engaged or of which they are or should be aware give particular meaning to and supplement or qualify terms of an agreement.”)
norms and other extrinsic evidence to attempt to fill gaps that are the product of ex ante linguistic uncertainty. This prediction follows from the model developed above—in a case of linguistic uncertainty, \( w \) (the marginal cost of an additional unit of contracting) is likely to be quite high and, as a result, the parties may choose to leave a gap in the contract.

Indeed, it appears that the complicated disputes that tailored software can produce have created a market niche for consultants to evaluate delivered software against industry norms and the original contract language.\(^{147}\) Scholars of computer law argue that the complexity of software means that “[p]erfect tender [would be] a disaster for the software industry where software may be composed of millions of lines of code.”\(^{148}\) Transactors presumably cannot operate under rules of perfect tender in the software context because doing so would require a massive investment in filling contractual gaps.

The inability to completely fill gaps caused by linguistic uncertainty means that transactors must make choices of how to manage the risk posed by these gaps. The choice of dispute resolution forum will, of course, affect the decision about how significantly to invest in filling contractual gaps. Compare the gap filling process in a regime that is formalistic, and thus generally hostile to extrinsic evidence, versus a regime that welcomes contextual elements in adjudication. Take, for example, a situation where parties litigate the question of whether or not performance is conforming and there is an (efficient) industry norm that speaks to this issue. In a regime that is more formal, transactors must look to the language of the contract to determine whether performance is conforming. If the norm is relatively easy to reduce to language (meaning a low \( w \)), as it may be in the case of industry standards concerning definition of grain grades, then one would expect to see this language in the contract. This language can both clarify the expected performance, thus increasing the surplus associated with the exchange, and decrease the expected probability and cost of dispute by creating common expectations about the result. If the norm cannot be easily reduced to contract language, as appears to be the case in language concerning adequate tender in computer contracts, then transactors face a number of choices about how best to manage this risk.

\(^{147}\) See, e.g., the explanation that Software Productivity Research gives for their services: “Customers claiming that the vendor delivered software late, delivered it with unacceptable error levels, or failed to deliver it at all often cause disputes associated with breaches of contract. Vendors, on the other hand, charge that customers unilaterally change the scope of agreements beyond the intent of the original contract.” Available at http://www.spr.com/dispute/breach.htm.

Transactors may decide that the benefits of memorializing their intentions are worth the costly investment because the risk of a protracted and costly dispute justifies the expense. Alternatively, transactors may opt to include a term that directs tribunals to look to industry norms to decide a dispute. Yet another choice is to leave a genuine gap in the contract. A clause that references industry norms may be attractive for transactors when there are generally efficient norms in the relevant community. For example, in the case of the software industry it may be the situation that industry experts can determine with relative ease whether a delivered product meets industry standards for performance.  

At the same time, it may be quite difficult to reduce these standards to language that is intelligible to a generalist jurist. As a result, the most cost effective means of managing the risk of a dispute would be a norm incorporation clause. Such a term would be quite inexpensive to draft, but would also imply a relatively costly dispute resolution process because of the need for expert testimony. This option may be less expensive than the cost of attempting to overcome the problem of linguistic uncertainty through more ex ante investment in drafting better contract terms. The choice of dispute resolution forum may, however, make reference to industry norms unnecessary because the default rules of the relevant forum take care of this decision.

3. Construction Contracts

Construction contracts often involve the low-frequency high-uncertainty characteristics that can lead to a preference for less formal rules of contract interpretation. The presence of gaps in construction contracts stems, in part, from the intense level of detail that these projects usually involve and the narrow time windows that parties have to agree upon and specify these details in an executed contract. Rather than incur the significant costs that would be necessary to draft a complete set of tailored contracts to govern the relationships between owners, architects, general contractors, subcontractors, and other involved parties, the construction 

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149 Clayton Gillette has articulated a framework for predicting when a transacting community may favor the use of trade usage and custom in formal dispute resolution. See Clayton P. Gillette, *The Law Merchant in the Modern Age: Institutional Design and International Usages under the CISG*, 5 CHI. J. INT’L L. 157 (2004). He identifies observability of a practice as an important variable to predict a preference for incorporation, although he does not emphasize the role that linguistic uncertainty may play in incorporation preference. *Id.* at 163.

industry relies heavily on form contracts. The American Association of Architects ("AIA") provides a series of boilerplate agreements that can be minimally tailored by filling in blanks and checking boxes. Use of the AIA contracts dominates the industry; updates to this documentation take place approximately every ten years and this process occasions much comment and discussion from the interested parties.

The reliance on standard form contracts suggests relatively minimal ex ante investment in contract drafting. This feature appears to differentiate construction contracts from the more highly tailored contracts observed in the mergers and acquisitions context. The typically lower stakes of construction contracts relative to the deal size observed in United Rentals may explain why transactors in the construction industry tend to avoid high levels of ex ante investment. But this aspect of construction contracts may create some tension insofar as transactors must trade off the value of a less-than-ideal contract term against the benefit of increased certainty about how a court is likely to interpret that term.

The ex post dispute resolution choices in the construction industry differentiate it from the preference for formal adjudication observed the high-frequency low-uncertainty commodities transactions studied by Bernstein. From 1888 to 2007, the AIA owner-contractor agreements mandated that any disputes be resolved through mandatory arbitration.

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151 If the hypothesis that the stakes of the transaction explain some of the reliance on standard form contracts is correct, one would expect, all other things being equal, that high-stakes construction projects would rely less on the standard form contracts relative to low-stakes projects.

152 Michelle Boardman argues that the ongoing dialogue between insurance attorneys and courts that occurs through repetition and refinement of often-used, but arcane, contract terms is an important and underappreciated aspect of insurance contracts. See Michelle Boardman, Contra Proferentem: The Allure of Ambiguous Boilerplate, 104 Mich. L. Rev. 1105 (2006).

153 Marcel Kahan and Michael Klausner develop the theory of the tradeoff between the benefits of contract term standardization and the potential costs posed by the path dependency of contract term harmonization and conduct an empirical explanation into these effects in the context of bond covenants. See Marcel Kahan & Michael Klausner, Standardization and Innovation in Corporate Contracting (Or "The Economics of Boilerplate"), 83 Va. L. Rev. 713 (1997); see also Michael Klausner, Corporations, Corporate Law, and Networks of Contracts, 81 Va. L. Rev. 757 (1995).

interpretation. Instead, the AIA arbitration framework default is the use of the American Arbitration Association (“AAA”) rules, the canonical set of rules for general commercial arbitration.\(^\text{155}\) This long-standing feature of construction contract governance suggests a preference for the contextual interpretation that general commercial arbitration usually entails.

One observes further evidence of the absence of a desire for formal interpretation in the commentary to the 2007 revision of the contractor-owner form agreements. In a significant change, the AIA altered the mandatory nature of the arbitration clause and allowed parties to choose between arbitration and litigation, with litigation as the default. The AIA’s published discussion of that revision, which synthesizes the comments received from construction industry participants, does not contain any suggestion that a preference for less reliance on extrinsic evidence factored in the decision. This absence is not surprising because—relative to the industry-specific arbitration discussed above—general commercial arbitration and conventional litigation may not differ substantially in their willingness to engage in contextual interpretation. Rather, the commentary addresses the common tensions between general commercial arbitration and litigation observed by other commercial actors and academics.\(^\text{156}\) Those who favored arbitration preferred the ability to designate industry specialists to resolve disputes rather than present their cases to the generalist jurists encountered in litigation. The complaints about arbitration focused on limited appeal rights and a cost structure that can equal or exceed public litigation.\(^\text{157}\) This commentary suggests that transactors in the construction industry, unlike those in the commodity industries studied by Bernstein, do not have an especially strong aversion to dispute resolution frameworks that take a solicitous view of extrinsic evidence.

### V. Synthesis and the Dispute Resolution Decision

The model of gap filling developed in this Article speculates that the attributes of a transaction will affect the decision of how much to invest in the contracting process and also will influence the choice of dispute resolution mechanism. This section synthesizes the arguments and the contracting model developed above to suggest how transactions will sort themselves into different dispute resolution regimes, such as industry-specific arbitration, general commercial arbitration, and public adjudication under the UCC. This section subsequently discusses intermediate mechanisms for managing the risk created by contextual gaps before

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\(^\text{155}\) *Id.* at 5.
\(^\text{156}\) *Id.* at 4.
\(^\text{157}\) *Id.*
making some concluding comments, including a table that predicts the dispute resolution choices for different transactions according to their frequency, uncertainty, and insularity.

A. Industry-Specific Arbitration

As the review of Bernstein’s work indicates, much industry-specific arbitration uses formal methods of interpretation. These approaches severely restrict the use of extrinsic evidence and strive to find the governing standards of a transaction within the four corners of the applicable contract. This sort of formal interpretation has several likely effects on the elements of the contracting model developed above. Relative to more contextual approaches, formal rules almost certainly decrease the probability of protracted legal disputes because these rules make it easier to predict likely outcomes. The relative ease of application of formal rules and the limited discovery rights typical of industry-specific arbitration should also have the effect of minimizing dispute resolution costs. Collectively, these factors suggest that formal dispute resolution is likely to decrease the \( p(x)c \) term (which measures the cost of dispute resolution as a function of contractual completeness). The apparent ability of formal interpretation to lower the expected costs associated with litigation implies that this approach will be particularly appealing when transactions are frequent and when each transaction involves relatively low stakes. When transactions have these features, the prospect of expensive adjudication may eliminate the surplus from exchange for a substantial number of transactions.\(^{158}\)

A high frequency of transactions will also facilitate the ability of transactors to draft complete contracts by driving down the marginal costs of contracting. If predictive and linguistic uncertainty is low, as it appears to be in the commodity markets studied by Bernstein, one would expect the low marginal cost of contracting to produce contracts that are relatively free of gaps, which transactors prefer to have interpreted in the highly formal manner that one observes in some instances of industry-specific arbitration.

B. General Commercial Arbitration

General commercial arbitration has been associated with lower dispute resolution costs relative to public litigation, although some have

\(^{158}\) For casual empirical evidence that the costs of a straightforward commercial contract dispute are approximately $10,000 see Melvin A. Eisenberg and Brett H. McDonnell, *Expectation Damages and the Theory of Overreliance*, 54 Hastings L.J. 1335, 1369 (2003) (suggesting that more complex cases require legal fees in the $50,000 to $100,000 range and that high-stakes claims regularly produce legal fees over $1 million).
challenged that view recently. Arbitration differs from industry-specific arbitration, as well as public litigation, in that it generally provides parties with much more confidentiality in resolving disputes. Firms may prefer this privacy because it keeps trade secrets from the public record and diminishes the risk of loss in reputation or brand value because of questionable practices exposed in the course of litigation. Arbitration, however, is not without its costs. Relative to public litigation and the

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159 While arbitration can save costs through limited discovery and circumscribed appeal rights, the parties do have to pay for the arbitrators, which can diminish or even eliminate the cost savings associated with arbitration. Some have suggested that this feature of arbitration may eliminate any cost advantage relative to public litigation. See, e.g., Henry S. Noyes, If You (Re)Build It They Will Come: Contracts To Remake The Rules Of Litigation in Arbitration’s Image, 30 HArv. J.L. & PUB. POL’y 579 (2007) (suggesting that arbitration may not offer a cost advantage relative to trials because parties must pay the arbitrators). But see Theodore Eisenberg and Geoffrey Miller, The Flight from Arbitration: An Empirical Study of Ex Ante Arbitration Clauses in the Contracts of Publicly Held Companies, 56 DEpaul L. REV. 335 (2007) (documenting a decline in the use of arbitration and suggesting cost as a factor); Thomas J. Stipanowich, ADR and the “Vanishing Trial”: The Growth and Impact of “Alternative Dispute Resolution,” 1 J. EMpIrICAL LEGAL STUD. 843, 876 (2004) (suggesting that arbitration costs less relative to use of the public courts); U.S. Gen. Accounting Office, Alternate Dispute Resolution: Employers’ Experiences With ADR in the Workplace 19 (1997) (finding lower fees in the context of employment arbitration); Lewis L. Maltby, The Projected Economic Impact of the Model Employment Termination Act, 536 ANnALS AM. ACAD. POL. & SOC. SCI., 103, 117 (1994) (same).

160 See Omri Ben-Shahar and Lisa Bernstein, The Secrecy Interest in Contract Law, 109 YALE L.J. 1885, 1918 n. 91 (2000) (“In general, a desire to keep proceedings private is an important reason that transactors opt for alternative dispute resolution (“ADR”). The press and other members of the public who have wide access to judicial proceedings have no right to attend private ADR proceedings.”) In addition, the American Arbitration Association advises that arbitrators render judgments in secret without findings of fact or law. See American Arbitration Ass’n, Commercial Arbitration Rules, R. 42-45 (1993). Moreover, practice manuals that tout arbitration tend to emphasize secrecy as a primary benefit of arbitration. See, e.g., Thomas C. Klein, Non-Disclosure Agreements in Venture Capital Transactions, 4 ADVISING START-UP & EMERGING COMPANIES 1 (2003) (“[Arbitration clauses] will prevent any disputes from being played out in public, and will be a faster, and therefore more efficient, route to a resolution of the dispute. The outcomes of arbitration are no better or no worse than those of a court, but the process can be confidential, and is speedier and therefore less expensive.”); Danielle Fugazy, John Delaney & Jay Rand, Did You Check With Counsel? Attorneys Growing Role in VC, VEn. CAP. J. (Jan. 1, 2003) (“Venture capitalists have an interest in not airing their dirty laundry in public, and arbitration clauses are a good way to make sure disputes are handled quietly and confidentially. If disputes have to be argued in a courtroom, it’s hard to keep that out of the press.”)

161 Some believe that the freedom that arbitrators typically enjoy means that arbitration can approach lawlessness. See, e.g., Stephen J. Ware, Default Rules from Mandatory Rules: Privatizing Law Through Arbitration, 83 MiNN. L. REV. 703, 725 (1999) (stating “arbitrators often do not follow the law.”). A recent overview of the empirical work the
industry-specific arbitration studied by Bernstein, arbitration provides less predictable results; this is because limited appeal rights provide arbitrators with substantial discretion to resolve disputes.\textsuperscript{162} The secrecy attendant to general commercial arbitration also contributes to uncertainty because, while one may be familiar with the reputation of an arbitrator, there will be substantially less information about how the arbitrator decides cases due to the lack of publicly available opinions.\textsuperscript{163}

This mix of costs and benefits highlights the situations where arbitration may be an attractive option. Assuming that the conventional wisdom about the costs of arbitration is correct, this means that the \( c \) term in the equation above is likely to be lower under arbitration regimes.\textsuperscript{164} Like industry-specific arbitration, this low-cost feature will make general commercial arbitration attractive in low-stakes transactions. Low-stakes transactions presumably create smaller amounts of surplus. As a result, the prospect of high-cost adjudication under common law or the UCC may create a disincentive to using public adjudication because the expected cost of resolving the dispute eclipses the surplus from the transaction.

Arbitration may also appeal in situations where high uncertainty creates a barrier to drafting complete contracts. The more contextual approach of arbitrators—at least relative to industry-specific arbitration—may allow beneficial ex post gap filling by looking to industry norms, evidence from drafting, and other extrinsic indicia of the parties’ intentions.\textsuperscript{165} It appears, claims that underlie the assertion of lawlessness—such as the belief that arbitrators do not follow the law, that parties choose arbitration to avoid mandatory rules, and the argument that arbitration stunts the development of the common law—find little support for them. See Christopher Drahozal, \textit{Is Arbitration Lawless?}, 40 LOY. L. REV. 187 (2006).


\textsuperscript{163} Of course, if an attorney or firm has experience with a given arbitrator there will be more information about her tendencies and thus more certainty in predicting a result. As a general matter, however, both the secrecy of arbitration agreements and the requirements of attorney-client privilege will tend to stem the flow of information about arbitrators. This lack of reputational evidence may be mitigated by the fact that many arbitrators are retired judges who are generally familiar to the legal community. One should not, however, ignore the prospect that judges may decide cases quite differently when their opinions will not be published and will not be subject to appellate review.

\textsuperscript{164} Note that lower the costs of a dispute may make a dispute more likely because it is less expensive to pursue and defend a claim.

\textsuperscript{165} A study by Christopher Drahozal nicely illustrates the different approaches that general arbitrators take to contextual evidence relative to their industry-specific counterparts. Drahozal surveyed arbitration opinions issued by the International Chamber of Commerce (“ICC”) and found some support for the conclusion that international transactors like rules that fill contractual gaps with business norms, but he did not find similar support for course-of-performance rules. See Christopher R. Drahozal, \textit{Commercial
therefore, that arbitration may appeal where the stakes of a transaction are low, but where there is insufficient frequency to allow for boilerplate and uncertainty precludes effective contract drafting. This set of attributes fairly describes the context of many employment contracts—a situation where it is difficult to describe the expected obligations of each party, but the stakes of a contract may not justify the high expense associated with public litigation. It is not surprising then, that Ted Eisenberg and Geoffrey Miller’s study of publicly available contracts finds a particularly high incidence of arbitration clauses in employment contracts.

There may also be an organizational benefit to the open-ended nature of arbitration decisions. When arbitrators are not bound by formal law, they may tend to decide cases on the basis of general conceptions of good-faith behavior. Put differently, arbitrators that are not bound by any formal law may have a freer hand to punish what they view as audacious or bad-faith behavior. This tendency can economize on organizational costs by minimizing monitoring costs for firms. Instead of investing the potentially

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Norms, Commercial Codes, and International Commercial Arbitration, 33 Vand. J. Transnat’l L. 79 (2000). Though it is difficult to generalize given the lack of information provided about transactors by the ICC, this study may provide some support for the notion that high-stakes uncertain transactions generate a preference for more contextual interpretation. See id. at 97 (stating that the ICC cases involve “higher stakes transactions than the trade association arbitrations in Professor Bernstein’s study.”).

Clayton Gillette also contrasts international arbitration with the work of Bernstein and uses the context-driven approach of the Convention on Contracts for the International Sale of Goods (“CISG”) as a foil for the claims of Schwartz and Scott. He specifies a theory to predict when transactors will prefer the incorporation of trade usage and custom into their legal obligations and suggests that international trade meets these conditions. Gillette then claims that adjudication under the CISG meets the desires of these transactors for an institution that accommodates this incorporation preference. See Clayton P. Gillette, The Law Merchant in the Modern Age: Institutional Design and International Usages under the CISG, 5 Chi. J. Int’l L. 157 (2004). See also Avery Wiener Katz, The Relative Costs of Incorporating Trade Usage into Domestic Versus International Sales Contracts: Comments on Clayton Gillette, Institutional Design and International Trade Usages Under the CISG, 5 Chi. J. Int’l L. 181 (2004) (arguing that Gillette does not take full account of the costs related to more contextual approaches to interpretation and offering additional reasons why parties may have a stronger preference for more substantive interpretation in international transactions relative to cases that would be subject to domestic U.S. courts).

One suspects that arbitration will be favored where insularity is too low to allow for the establishment of a private legal system that has been tailored to the needs of an industry.

See Theodore Eisenberg & Geoffrey P. Miller, supra note 161, at 350. Eisenberg and Miller find that 37% of publicly available employment contracts contain arbitration clauses. This study also observes a highly negative correlation between contract standardization and arbitration clauses. That finding supports the inference that a high frequency of transactions—which permits the effective standardization of contract terms—can contribute to a preference against the contextual nature of arbitration.
large costs in educating employees on the sometimes arcane and counterintuitive rules that come with formal legal rules firms can rely on internalized norms of good faith.\textsuperscript{168} By encouraging corporate cultures that promote corporate norms of good faith, firms can promote generally efficient practices that also may serve them well when disputes wind up in arbitration. For example, by terminating employees that engage in sharp dealing and other opportunistic practices that deviate from accepted norms, firms can minimize the risk of adverse decisions in the context of arbitration.\textsuperscript{169} Depending on the contours of a given industry this method of governance may be superior to relying on a formal, industry-specific arbitration system.

C. Public Adjudication Under the UCC and Common Law

Adjudication under the UCC and common law in the public court system differs from industry-specific arbitration and general commercial arbitration in important ways. The most important difference is the generally higher cost of litigation under the UCC. These higher costs stem from generally longer discovery and pre-trial periods as well as the possibility of undergoing a lengthy appeals process. The contextual nature of many UCC rules contributes to the higher dispute resolution costs by placing a higher evidentiary burden on parties. Rules such as course of performance and looking to industry norms will tend to require more significant investments in discovery, depositions, and expert testimony when compared to the more formal rules associated with industry-specific arbitration.\textsuperscript{170} One consequence of these higher costs is an increased pressure to settle cases.\textsuperscript{171} Settling cases benefits both parties by saving them the costs associated with dispute resolution. Settling cases will tend to

\textsuperscript{168} See generally Melvin A. Eisenberg, Corporate Law and Social Norms, 99 COLO. L. REV. 1253 (1999).

\textsuperscript{169} Bernstein makes much of the lack of a good-faith requirement in the NGFA rules. There certainly is something to the argument that an overly flexible approach to waiver and course of performance rules can impose rigidity and significant monitoring costs on organizations. But even NGFA arbitrators will not countenance what they view as large deviations from important industry norms, even if they are not part of any written contract or of the trade rules. See supra note 54.

\textsuperscript{170} It is difficult to make concrete conclusions about the cost differential between general commercial arbitration and public adjudication. The starkest contrasts between the two are the more limited appeal rights in general commercial arbitration and the need to pay the arbitrators, but not public judges. As discussed above, it is not entirely clear what the net cost difference will be between these two options, see supra note 159.

\textsuperscript{171} Given higher litigation costs associated with UCC litigation there will be a higher surplus from settlement agreements. The higher surplus should produce a higher rate of settlement relative to regimes where litigation costs are lower.
eliminate some of the variance in damages across dispute resolution regimes; however, settlement values should still reflect, to some degree, expected damages and expected dispute resolution costs. Using the framework developed above, one can venture a prediction about when the UCC approach may be appealing to transactors. Given that the UCC entails large litigation costs, it is likely the case that UCC litigation will be more appealing to transactors engaging in high-stakes transactions. In high-stakes transactions the potentially high cost of dispute resolution will serve as less of an impediment because of the larger surplus associated with higher stakes transactions. As the section on uncertainty discussed, transactions with a high amount of uncertainty are also likely create a preference for adjudication under the UCC because the contextual approach of the default rules can be a useful aid to filling in gaps in uncertain contracts. For all these reasons, high-stakes high-uncertainty transactions are candidates for adjudication under the UCC (as the examples of mergers and tailored software contracts suggested). While general commercial arbitration may be an attractive option for some of these sorts of transactions, at the highest stakes one may see stronger preferences for public litigation if the ability to appeal satisfies a demand for enhanced accuracy.

Of course, one should not treat adjudication under the UCC as a monolithic choice—jurisdictions may vary widely in how they apply their versions of the UCC. Some recent empirical work by Ted Eisenberg and Geoffrey Miller suggests that transactors be aware of this jurisdictional variance and may choose the law that governs a transaction accordingly.

D. Intermediate Solutions

The previous analysis implies that there are relatively strong distinctions between industry-specific arbitration, general commercial arbitration, and adjudication under the UCC. These dispute resolution mechanisms are, of course, not the only choices available to transactors—there is a broad array of mechanisms available for minimizing the risk and costs that come with dispute resolution. One particularly common technique that many industries use when private legal systems are not feasible is the production of a set of trade rules that memorialize the best practices of the industry. Among other things, these standards help to economize on

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See supra note 89 (discussing Schwartz and Scott’s arguments on the role of accuracy and decreased variance in bet-the-company litigation).
contracting and dispute resolution costs by providing a benchmark for gauging behavior.\textsuperscript{174}

As evidence from the software industry demonstrates,\textsuperscript{175} experts may fill the market niches created by the risk associated with dispute resolution. In particular, where there are high degrees of uncertainty in transactions, one should expect to see consultancies that develop expertise in evaluating the disputes that this uncertainty creates. Expertise in these areas can create surplus by minimizing the risk associated with these transactions. Another similar, interstitial, solution to managing risk is the use of specialized arbitrators. Transactors sometimes use arbitrators that have developed expertise in a particular subject area. These specialized arbitrators can also develop reputations for more formal or more contextual approaches to dispute resolution. This feature of specialized arbitrators can make them suitable for transactions with a wide variety of attributes. Use of specialized arbitrators presumably economizes on dispute resolution costs because these arbitrators already have some idea of the background context of the transaction. Moreover, these specialized arbitrators are likely to render more accurate results, minimizing the risk attendant to the lack of appeal rights.

E. Conclusion

The wide variety of choices available in the market for dispute resolution demonstrates that part of effective risk management for different transactions is choosing the style of interpretation that best suits the transaction. While it is certainly significant that grain, diamond, and cotton transactors largely opt out of Article 2 of the UCC, it is just as relevant to understanding interpretive preferences that many transactors chose more


\textsuperscript{175} \textit{Supra} Sec.(IV)(A)(ii).
contextual methods of dispute resolution such as public adjudication under the UCC and general commercial arbitration.

The variation observed in dispute resolution decisions made by actual transactors suggests that there may be limits to the New Formalism. The empirical and theoretical observations of the New Formalists provide powerful explanations of some observed dispute resolution preferences, but there is reason to believe that these insights are most appropriate where transactions are frequent and certain—features that allow transactors to draft relatively complete contracts. It is a more open question whether these conclusions are correct when the uncertainty and infrequency of other transactions result in gap-laden contracts. That there may be instrumental reasons for transactors to prefer more contextual types of contract interpretation in these situations suggests that there is a need for a more pluralistic approach to the formalism/contextualism debate than has traditionally been taken by contracts scholars. Rather than inquiries into whether formal or contextual rules are superior in all situations, it may be more instructive to take a closer look at the choices transactors make in different situations. This pluralistic view, if correct, is a necessary predicate to understanding how the default rules of commercial contract interpretation should be structured to minimize contracting costs.