INTRODUCTION

This Article uses models drawn from the theory of repeated games and evolutionary game theory to analyze the relationship between contract law and business norms. This relationship is central to modern, post-legal Realist contract and commercial law. To borrow from Grant Gilmore, one of the fundamental tenets underlying the Uniform Commercial Code ("Code") is that commercial legislation ought "to clarify the law about business transactions rather than to change the habits of the business community," to be "accurate and not to be original."1 On this view, Article 2 of the Code does not provide judges with a set of rules, but instead directs them to *find* the law through "directed exploration of the 'fact-pattern of common life.'"2 For the most part, Article 2 utilizes flexible standards such as commercial reasonableness and good faith which, at least in theory, allow judges "to reduce the gap between law and practice and to insure that decisions are practical and responsive to the needs, proven in the particular case, of the parties and the relevant business community."3 Thus, while the Code itself does not and cannot provide actual data on business practices,4 it nonetheless tells judges to

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4 See id. at 7-8 ("At the inception of Article 2 there was no fund of data [of relevant business practices] . . . . Moreover, access to such data is complicated by the variety of contexts within which goods are sold . . . . In these over-lapping contexts, actual business practices are difficult to identify and quantify . . . .").
attempt to mirror those practices or norms in resolving the disputes that come before them.

Multiple generations of legal scholars have now had an opportunity to analyze, interpret, criticize, and discuss Article 2. If one had no prior knowledge of the conventions and practices of legal scholarship, one might well have anticipated that the first thing such scholars would have done would have been to initiate empirical investigation into actual business practices. One might also have expected to see more theoretical work exploring Article 2's underlying assumptions. It is, for instance, far from clear that the legal fact-finding process is such that judges will be accurate in determining actual commercial norms from the evidence presented to them in litigated disputes. After all, by the very fact that they are not settled, disputes that end up in protracted litigation and a reported decision are different in some way from the typical dispute. Given the limitations that might be expected to confront judges who try to discern actual commercial norms from the evidence presented in litigated disputes, one might expect to see rather extensive analysis of Article 2's fundamental underlying principle, which is that judges should attempt to make contract law mirror the norms immanent in everyday commercial life.

The existing body of commercial scholarship frustrates these expectations. There are some studies that attempt to discern actual commercial practice, typically through surveys of business people and lawyers concerned with contract administration. Indeed, one of the most famous and oft-cited contracts articles of this century, Stewart Macaulay's *Non-Contractual Relations in Business*, reports the results of such a survey. But without exception, these surveys ask open-ended questions regarding what business people do and whether they know about or are influenced...

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by contract law in making their decisions. They do not theorize
about when contract law might be important to business people and
when it might not. They do not attempt to fashion sensible
questions based on an empirically based background picture of the
industry they study, but instead begin with presuppositions
regarding practices that are based on the facts of reported deci-
sions. Respondents in construction industry surveys, for instance,
are asked about bidding practices but never asked how often they
actually bid jobs. Moreover, all types of construction are lumped
together in these surveys, with no distinction drawn, for instance,
between government contract jobs and those in the home-building
trade. Chemical industry respondents are asked how they deal
with allocation in times of shortage, but there is no attempt to
correlate their responses with data on contract structure or other
characteristics of the relationship that might allow a pattern to
emerge.\footnote{See Franklin M. Schultz, The Firm Offer Puzzle: A Study of Business Practice in the
Construction Industry, 19 U. Chi. L. Rev. 237, 256-74 (1952) (investigating the
construction industry "firm offer" problem through an attitude survey of general
contractors and subcontractors in Indiana); Note, Another Look at Construction Bidding
and Contracts at Formation, 53 Va. L. Rev. 1720, 1731-44 (1967) (examining the
practices of over 100 general and subcontractors). Somewhat better methodology is
employed in Richard Lewis, Contracts Between Businessmen: Reform of the Law of Firm
Soc'y 153, 160 (1982) (surveying by questionnaire the views of a general contractor
and 11 subcontractors operating in the Cardiff area).}

Still, despite their shortcomings, these survey-based studies are
to be praised for at least attempting to provide some evidence
regarding actual business practices. What is most remarkable about
the body of commercial law scholarship is the paucity of studies that
even attempt to find out what business people do. What do appear
with great frequency in this literature are law review articles
exploring the application of various Code provisions in reported
decisions.\footnote{See White, supra note 6, at 16 (stating that "[o]nly the prospect of a large pay
off would justify the expense necessary to prove such [a pattern]").} Such work has generated a number of folk beliefs
regarding the performance of certain Code sections. It is, for
instance, now taken for granted that many reported decisions
involving the Statute of Frauds depict judges torturing the Statute
to find that it does not apply.\footnote{See e.g., Fairfax Leary, Jr. & David Frisch, Is Revision Due for Article 2?, 31 Vill.
L. Rev. 399 (1986).} Largely on this basis, elimination
of the Code’s Statute of Frauds (section 2-201) was supported by a majority of the Article 2 study commission.\textsuperscript{12} Similarly, the large number and great variety of reported decisions involving the Code’s proposed solution to the so-called “battle of the forms” (section 2-207) are taken as a clear indication that the section is a failure and that it ought to be reformed to look more like the Code as a whole.\textsuperscript{13}

It may be that some of these folk beliefs happen to correspond to actual problems in the application of various Code provisions. But the beliefs themselves can be nothing more than reactions to reported decisions, and they cannot possibly purport to say anything about the larger universe of cases involving application of the contested provisions without a theory of how the disputes that end up in reported decisions relate to the universe of disputes. While some commentators, such as James J. White, do theorize in a general way about how reported decisions are unrepresentative,\textsuperscript{14} they do not attempt to actually sharpen their general theories into more concrete and precise hypotheses regarding which sorts of disputes ought to be observed in reported decisions and what their appearance says about the larger universe.

Given what is in the literature, it is perhaps needless to note the complete absence of any studies systematically questioning the Code’s underlying assumption that the law ought to mirror commercial norms. But this supposition generates an enormous set of interesting and unexplored questions: How might judicial misapprehension of norms affect the process by which norms evolve and are maintained in a large commercial community? Is it really appropriate to apply norms that evolve in the context of ongoing relationships—relationships governed primarily by extralegal sanctions—to the resolution of litigated disputes that the parties by definition did not anticipate? And what can be learned from disputes that are litigated to a reported decision? Can a hypothesis be generated that will both explain such disputes and say something useful about the desirability of trying to find commercial norms by which such disputes ought to be resolved?

\textsuperscript{12} See id.

\textsuperscript{13} See James J. White, Promise Fulfilled and Principle Betrayed, 1990 ANN. SURVEY AM. L. 7; John E. Murray, Jr., The Chaos of the “Battle of the Forms”: Solutions, 39 VAND. L. REV. 1307, 1308-09 (1986) (stating that both courts and commentators believe that § 2-207 of the Code needs to be redrafted).

\textsuperscript{14} See James J. White, Evaluating Article 2 of the Uniform Commercial Code: A Preliminary Empirical Expedition, 75 MICH. L. REV. 1262, 1263 (1977).
This Article addresses the latter set of issues—those that involve how one might explain reported contract disputes and learn something from those disputes about the norms that contract law is designed to reflect. It does so by focusing on one norm in particular, the use of a written contract. Section 2-201 of the Uniform Commercial Code states the Statute of Frauds for contracts involving the sale of goods. According to this section of the Code, if such a contract involves the sale of goods exceeding $500 then it must be in writing to be enforceable. For over one hundred years, this statutory writing requirement has been criticized as fundamentally at odds with business norms and as having no effect on business behavior. In the words of one of the giants of the common law, Justice Stephen, "In the great mass of cases the contracting party is as unconscious of the existence of the Statute of Frauds as of the pressure of the atmosphere." If Stephen is right, then in the Statute of Frauds for the sale of goods we have an example of dissonance between contract law and contract norm. But even if Stephen has correctly identified an empirical phenomenon—lots of parties disregarding the formality of a written contract even when it is required for enforceability—there remains the job of explanation and confirmation. That is, why do parties (at least some) seem so indifferent to the formal requirements of the law and the Statute of Frauds in particular? And how might one test such an explanation?

In explaining why contracting parties are indifferent to the Statute of Frauds's writing requirement, it does not suffice to aver to a general lack of sophistication. Lack of sophistication may explain why some parties fail to comply with the legal requirements for enforceability, but the attack on the Statute of Frauds in the sale of goods context is not so much that it is a trap for the unwary as that it departs from the normal practice of sophisticated, legally aware buyers and sellers. To explain this departure, one must explain why such legally sophisticated contracting parties would care so little about the requirements of legal enforceability.

The simplest explanation for such sophisticated indifference to the law is that the parties have extralegal ways of enforcing their agreements. More precisely, if the effectiveness of such extralegal enforcement methods does not depend upon the existence of a
writing such as that required by the Statute of Frauds, then one would expect that when the parties rely primarily on extralegal enforcement they will not meet the writing requirement of the Statute of Frauds. Conversely, in situations where the parties anticipate legal enforcement at the time of contracting, one should expect to see a written contract when required by the Statute of Frauds. Put somewhat more broadly, one should expect to observe a norm of relative informality—indifference to legal formalities—in contract formation when extralegal rather than legal sanctions are the primary means of anticipated contract enforcement.

It is not novelty that makes such a theory interesting. Indeed, reliance on extralegal sanctions as the explanation for business norms that depart from contract law requirements date back more than fifty years, to some of Llewellyn’s early writings. What makes the theory worthwhile is that when refined, it has strong, testable implications. The refinement consists primarily of a more detailed explanation of when written contracts and other contractual formalities are likely to be unnecessary. This explanation draws upon recent work in game theory and a substantial body of empirical evidence on contemporary and historical contracting practices. According to this account, parties will not likely resort to detailed writings when transactions are relatively simple and when the primary sanction for a perceived failure to perform is the termination of the relationship. This hypothesis is more fully developed below, but its derivation warrants a brief explanation here. When the primary extralegal sanction is termination of the relationship, a “second party” sanction rather than third party sanctions such as boycotts or expulsion from a larger transactional community, the requisite level of detail in contract memorialization is determined solely by the parties’ own need to observe and verify performance. In relatively simple transactions, the parties themselves do not need detailed writings in order to observe and verify performance. Hence only in complex transactions would one expect to observe the use of relatively detailed written agreements when the parties have an established relationship of trust, a unique

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18 The legal implications of the economic distinction between observability and verifiability were first fully explored by Alan Schwartz, Relational Contracts in the Courts: An Analysis of Incomplete Agreements and Judicial Strategies, 21 J. LEGAL STUD. 271 (1992).
advantage, or both. On the other hand, where the parties are "strangers," in the sense that they lack any history of prior dealings, they ought to have an ex ante expectation that legal enforcement may well be necessary and this expectation should motivate them to rationally comply with the Statute of Frauds's writing requirement, even in transactions that are quite simple. Parties who rely upon extralegal third party sanctions might be expected to have a need for written memorialization that is intermediate between that of those who rely upon second party sanctions and those who rely upon legal sanctions. This hypothesis may be restated in somewhat more precise terms: In transactions that are not overly complex, the parties' history of prior dealings ought to be strongly predictive of the existence and detail of the writings memorializing their alleged contract. Where the parties have had a history of prior dealings, they ought to be less concerned with legal formalities ex ante, and one ought to observe few if any detailed writings memorializing the alleged contract. Conversely, where there is no evidence of prior dealings between the parties, one ought to observe plenty of quite detailed writings. For complex transactions, this relationship breaks down, in that detailed writings may be rationally used to memorialize complex agreements even when the parties do not expect to rely upon legal enforcement in the event of disagreement.

The ideal way to test this hypothesis would be to observe a large number of actual deals and to code these for the variables—the duration and structure of the parties' relationship, the likely effectiveness of third party nonlegal sanctions in their business community, and the complexity of their transaction—which the theory predicts will be important in determining whether or not the parties use written contracts that comply with the requirements of the Statute of Frauds. Unfortunately, there are at present no data from which to construct such a sample. As an admitted second best, I have taken as my sample all reported opinions volumes 18 through 23 of the UCC Reporting Service Second that are digested as involving section 2-201. After removing those opinions that do not involve a live, litigated section 2-201 issue,25 twenty-five opinions remained in the sample. I then coded these remaining opinions as to the following variables: (1) evidence of a history of

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19 This aspect of the coding was tested for validity by having three research assistants code for a "live, litigated section 2-201 issue." This measurement was, as detailed in the Appendix, reasonably but not perfectly reliable.
prior dealings and a prior business and/or social relationship between the parties; (2) the complexity of the agreement disputed in the case; (3) the existence and level of detail of the writings memorializing the alleged agreement; (4) the type and importance of the Statute of Frauds issue that was discussed in the opinion; and (5) evidence that the dispute reported was part of an "endgame" situation involving the termination of the parties' relationship (if one existed).

Most of the coded variables are those that the central hypotheses set out as explanatory. Whether the dispute is part of an "endgame" scenario is important for a related but different reason. The theory of extralegal sanctions sketched above and developed in more detail below says that an established relationship between the parties is likely to indicate both that they do not expect disputes to arise very often, and that they expect disputes to be resolved successfully when they do arise. That is, a (credible) second party sanction of terminating the relationship is expected to induce each side to seek to resolve whatever disputes do arise. Thus a fairly direct implication of this theory of credible extralegal, second-party sanctions is that litigation over alleged breach—and, a fortiori, reported opinions—would be observed between parties with an established relationship only when that relationship has terminated.

Coded in this way, the sample provides the basis for two sorts of empirical tests. One is informal and involves a simple counting and correlation between, for example, the existence and detail of the writings in the case and evidence of a prior relationship between the parties. The other sort of test is econometric, and involves regressing the dependent variable—the existence and level of detail of the writings—against the key explanatory variables—transactional complexity and evidence of a prior relationship.

There are, of course, a number of difficulties that beset both sorts of tests. The sample used here is relatively small, making any statistical test relatively weak in terms of its power.\(^{20}\) This shortcoming acknowledged, however, it is nonetheless possible to make statements regarding statistical significance. Perhaps more funda-

\(^{20}\) Here, power refers to the ability of the test to distinguish the hypothesis tested from the alternative (for instance, that evidence of a prior relationship does not predict the existence and detail of the writings), and in more formal terms refers to the sum of the probabilities of type I and type II errors. For an introduction to this notion, see H.D. Brunk, AN INTRODUCTION TO MATHEMATICAL STATISTICS 340-43 (3d ed. 1975); Peter Kennedy, A GUIDE TO ECONOMETRICS 70 (3d ed. 1992).
mentally, a sample of contracting scenarios drawn from reported opinions may be systematically unrepresentative of the larger universe of contracts because of the selection bias in disputes that end in litigation and a reported decision.\(^2\) It is, however, possible to develop scenarios regarding the type of selection bias that may be present in reported decisions and to examine the logical relationship between particular inferences drawn from such a sample and the nature of the bias in the sample. To the extent that the logical validity of the inferences are unaffected by the bias, the sample evidence is robust with respect to sample selection bias. Thus, even with a relatively small sample of reported decisions, it is still possible to find statistically significant results, and results that are robust with respect to the likely direction of selection bias.

In the sense of generating significant and robust implications, the sample evidence provides strong support for my theory of when business practice dictates the written memorialization of agreements and compliance with the Statute of Frauds. In addition, it provides some perhaps rather surprising evidence that judges are applying the Statute in a predictable way that tends to make statutory requirements mirror business practice. As for the theory of business norms regarding written agreements when required by the Statute of Frauds, perhaps the most striking finding is that in over fifty percent of the cases in my sample involving parties with a prior relationship (five of nine), the parties did not have written agreements.\(^2\) By contrast, in only approximately seven percent (6.6%) of the cases involving “strangers” (one out of fifteen) did the parties fail to have a writing, and the single “stranger” case where the parties failed to have a writing was an art sale that was brokered by merchants whose own close and continuing business relations may have made second party sanctions the anticipated enforcement mechanism. The explanatory importance of the status of the parties’ prior relationship is, moreover, strongly supported by the

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\(^2\) In the literature to date, the dominant theoretical account of such bias is that given by George L. Priest and Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1 (1984). This model of selection bias has been confirmed by some empirical tests. See Peter Siegelman & John J. Donohue III, *The Selection of Employment Disputes for Litigation: Using Business Cycle Effects to Test the Priest-Klein Hypothesis*, 24 J. LEGAL STUD. 427 (1995); Joel Waldfogel, *The Selection Hypothesis and the Relationship Between Trial and Plaintiff Victory*, 103 J. POL. ECON. 229 (1995).

\(^2\) The data on case coding are set out in detail in the Appendix, and some individual cases are discussed in the text. *See infra* notes 104-22 and accompanying text.
statistical insignificance of transactional complexity explanatory variables in the regression analysis.

The sample data also suggest that judges are applying the Statute of Frauds in a predictable fashion that closely mirrors business practice. In every one of the five cases that involved parties with a prior relationship and no written contract, the court either found a statutory exception to the writing requirement or found that the Statute did not apply. By contrast, in all but one of the "stranger" cases, (where the merchant exception was invoked to avoid a finding of insufficient writings) the courts found that the Statute of Frauds applied and determined statutory sufficiency in a way that was true to business practice in such settings; that is, the courts rejected arguments that the writings were insufficient when such arguments were formalistic attempts to avoid rather obvious agreements, but accepted insufficiency arguments when the failure to comply with the statutory requirements (such as signing) indicated that no deal had been reached.

These findings suggest that the recent debate over abolition of the Statute of Frauds is based on a serious misconception of what the reported decisions imply about the larger universe of agreements. The evidence presented here tends to indicate that courts are applying the Statute in a highly predictable way that is consistent with underlying norms. Courts recognize norms of informality in established relationships and find exceptions to the statutory writing requirement. In "stranger" relationships where formalities were observed because litigation was an expected response to future disagreement, the courts in my sample both respect the writing requirement and dispose quickly of marginal arguments that the writing was insufficient. As Posner points out, the normative significance of these results is rather complex. Still my results caution that abolishing the Statute because it does not matter in continuing relationships with repeat dealings might provide little or no benefit in such settings while harming the certainty of one-shot, non-repeat transactions, where parties use written contracts for precisely the reasons that motivated Parliament to enact the first Statute of Frauds over three hundred years ago.

I. **The Statute of Frauds Problem**

The Statute of Frauds sets up a formal requirement for contract enforceability. The Article 2 Statute of Frauds, section 2-201, states that contracts for the sale of goods exceeding $500 are enforceable only if there is "some writing sufficient to indicate that a contract for sale has been made between the parties and signed by the party against whom enforcement is sought." There are three general exceptions to this requirement of a signed writing and one exception that applies only to merchants. The general exceptions are for (1) contracts involving specially manufactured goods; (2) admissions in court of the existence of a contract; and (3) partially performed contracts. A special exception for merchants provides that an oral contract between merchants is enforceable when it is confirmed in a writing signed by the sender and when the recipient has knowledge of and fails to object to the signed confirmation.

Commentators who have looked closely at the drafting history of section 2-201 agree that its final form reflects Karl Llewellyn's rather complex understanding of the role of written formalities in contract enforcement. On the one hand, Llewellyn was well aware of the criticism of the Statute of Frauds as found in the 1906 Uniform Sales Act. Under the Sales Act, enforceability required a signed note or memorandum that stated "with reasonable certainty all the essential elements of the transaction." By the
time Llewellyn began drafting section 2-201, critics had widely challenged this requirement as a formality that failed to reflect business practice. The requirement did not prevent fraudulent assertions that a contract existed when one did not, but rather facilitated fraudulent denials of oral deals. Llewellyn acknowledged these criticisms and the possibility of doing without a Statute of Frauds (as many states, England, and continental Europe have done). He nonetheless felt that the right sort of formal writing requirement would both validate and encourage good business practice. Llewellyn relaxed the requirement that the writing set out "all the essential elements of the transaction," but still maintained a writing requirement. In so doing, he attempted to eliminate the Statute as an instrument of fraud while adding "both the desire and a reasonable machinery for a businessman to be able to rely on what both parties sign and on the fact that he has procured a memorandum signed by the other party." Similarly, in creating the merchant exception for written confirmations, Llewellyn sought to reward and encourage what he found to be the better business practice: "the general indirect effect of the statute, in urging men to get their deals into writing, is highly salutary; and . . . the practice of 'confirming' oral or telephone deals is today so ingrained that the statute no longer costs the price in occasional hardship which it cost a century ago."

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51 In arguing for the Code's adoption, Corbin nonetheless criticized the idea of retaining the Statute of Frauds on the ground that "from the very first, the requirement of a signed writing has been at odds with the established habits of men, a habit of reliance upon the spoken word in increasing millions of cases." Arthur L. Corbin, The Uniform Commercial Code—Sales; Should It Be Enacted?, 59 Yale L.J. 821, 829 (1950).

52 See Zipporah B. Wiseman, The Limits of Vision: Karl Llewellyn and the Merchant Rules, 100 Harv. L. Rev. 465, 518 & n.232 (1987) (discussing commentary which criticized the Statute of Frauds as promoting, rather than preventing, "reneging" on oral contracts). The Statute of Frauds was enacted in England in 1676, with the goal of preventing fraudulent assertions that contracts had been made. See id. at 517 & n.231.


54 Id. at 1156 (quoting N.Y. Law Revision Report, supra note 53, at 109).

55 Wiseman, supra note 32, at 518 (quoting Revised Unif. Sales Act § 4 cmt. 3 (Report and Second Draft 1941)).
There is, then, a good deal of evidence to suggest that section 2-201 emerged from Llewellyn's own calculus of the costs and benefits of a formal writing requirement. On this view, a writing requirement reflected and rewarded better business practice and encouraged others to adopt the norm of written memorialization. The cost of the writing requirement was in the use of the Statute to dishonestly avoid an actual deal. This cost Llewellyn attempted to minimize by requiring only "some writing." And he thought the cost likely to be small and decreasing because "the whole practice of all intelligent business is to confirm in detail or make careful written contracts so that the number of cases in which defective memos will actually come into operation not only is almost nugatory, but is decreasing by the minute."36

As a relatively explicit cost-benefit policymaking effort, commentators have generally viewed section 2-201 as a deviation from the general Article 2 philosophy of reflecting business practice. Ingrid Hillinger argues that "[r]ather than paying homage to actual mercantile practice, section 2-201 . . . codified what Llewellyn thought should be the law regarding commercial transactions."37 Zipporah Wiseman believes that section 2-201 manifests Llewellyn's "normative vision of merchant reality,"38 and contends that even if the Statute properly balances the costs and benefits of a writing requirement in the merchant exception, "such an argument provides no basis for imposing similar duties, and tolerating potentially greater injustices, in the nonmerchant arena."39 When commentators have looked closely, they have found that the conceptual underpinnings of section 2-201 are shakier than Llewellyn thought.

Evaluation of section 2-201's performance has tended to be equally critical. Noting the considerable litigation, controversy, and commentary generated by section 2-201, the Study Group recently engaged to report on the Revision of Article 2 found "no persuasive evidence either that the statute of frauds has prevented fraud in the proof of the making of a contract or that its presence has channeled behavior toward more reliable forms of record keeping."40 The study did find that repeal of the Statute in England had occurred

36 See Hillinger, supra note 33, at 1155 n.88 (quoting N.Y. LAW REVISION REPORT, supra note 33, at 164).
37 Id. at 1155.
38 Wiseman, supra note 32, at 518.
39 Id. at 519.
40 ARTICLE 2 PRELIMINARY REPORT, supra note 3, at 50.
with little if any subsequent discussion or reports regarding the impact of the repeal.41 It also called attention to the many reported opinions in which courts were clearly “straining to avoid the statute when it [was] clear that some agreement existed,” although there was no writing.42 Despite reiterating the “lack of evidence” regarding the behavioral effects of the Statute, the available evidence from litigated cases and the English experience “persuaded most” of the Study Group that “§ 2-201 should go.”43

Debate over the desirability of a statutory writing requirement for contracts involving the sale of goods began long before Karl Llewellyn’s appearance on the historical scene. Writing in 1885, Justice Stephen criticized the English statutory writing requirement for the sale of goods as arbitrary, out of step with business practice, and ineffective in changing such practice.44 Stephen argued that “the power of the law to control conduct is small, and is constantly exaggerated,” and that since “custom,” and not law, regulates the “great mass of human transactions . . . . Laws ought to be adjusted to the habits of society, and not to aim at remoulding them.”45 These criticisms, of course, are precisely the same sorts of arguments made against the Statute of Frauds as found in section 2-201. Moreover, from Stephen’s time until now, the argument that the Statute of Frauds is maladapted to business practice has been grounded in large part on commentators’ adverse reaction to “strained” opinions that strive to avoid the Statute. But how, one might ask, are such opinions to be understood without an underlying theory of how business practice evolves and how business practice is reflected in reported opinions? The next Part of this Article begins the task of building and testing such a theory.

II. THEORY OF THE RELATIONSHIP BETWEEN BUSINESS PRACTICE AND THE STATUTE OF FRAUDS’S WRITING REQUIREMENT

As the preceding Part has shown, traditional normative criticism of the Statute of Frauds for the sale of goods has rested on two positive or descriptive assertions. The first of these is that the statutory writing requirement deviates from common business practice or norm and is moreover ineffective in altering business

41 See id. at 51.
42 Id. at 53
43 Id.
45 Id.
practice. The second, related assertion, is that reported opinions in which judges struggle to avoid application of the Statute are good evidence not only of the difference between statutory command and business norm but also evidence that such deviation generates precisely the sort of unpredictability and uncertainty regarding the legal effect of a writing that the Statute was supposed to eliminate. Drawing on both recent results in game theory and accumulated empirical evidence, this Part explores the positive assertions underlying the normative critique of the Statute of Frauds. In so doing, it constructs a two-part theory. The first part of the theory explains that when contracting parties rely on extralegal enforcement rather than legal enforcement, they will use writings only if writings are required by their own need to verify complex performance obligations. The second part of the theory explains why it may nonetheless be rational for the parties to litigate when their relationship ends and how reported opinions describing such litigation may be used to test the theory of rational non-compliance with the statutory writing requirement.

A. Complying with the Statute of Frauds: A Game Theoretic Explanation

This Article endeavors to examine and explain—within the context of the Statute of Frauds—when parties use relatively detailed formal writings to make their contracts and when they do not. Rather than building such a theory deductively—within a relatively formal, mathematical model—I will proceed inductively, drawing rather precise, testable hypotheses regarding compliance with the Statute of Frauds from both contemporary and historical evidence regarding written formality in contract formation. These hypotheses emerge when the empirical evidence is interpreted in the light of game-theoretic insights that explain why it may sometimes be rational for contracting parties to rely on extralegal versus legal sanctions for nonperformance.

In interpreting evidence on the use of detailed writings in contract formation, it is important first to distinguish between legal and extralegal reasons for using a writing. As a piece of the formal machinery of contract enforcement, a statutory writing requirement itself can affect only the behavior of those parties who contract with an ex ante awareness of the likely need for ex post legal enforcement of their deal. Within the complementary universe of those who contract without thinking about what is required to ensure ex
post legal enforcement, detailed writings may still be used, but their use by definition will not be motivated by what the Statute of Frauds might happen to require. Rather, for contracts that are expected to be enforced extralegally, the existence and detail of the written contract ought to be determined by the functional requirements of effective extralegal enforcement. Any theory that would account for observations on the existence and detail of written contracts must therefore provide an account of how written contracts facilitate effective extralegal enforcement.

Explaining how writings facilitate extralegal enforcement requires some theory of the mechanisms of extralegal enforcement. In its broadest outline, such a theory is well-known and is grounded on the notion, in some settings, that there exist effective extralegal sanctions for contract breach. As aptly summarized in a recent article by David Charny, an extralegal sanction generally takes the form of a benefit that acts as a bond which will be lost upon breach of a contractual obligation. In close and continuing relationships, a primary extralegal sanction is the threat to terminate the relationship, causing the breaching party to lose expected future relationship-specific advantages. Moreover, to the extent that the parties’ economic or commercial relationship is embedded within a concrete and ongoing personal relationship between them and a similar structure of such relationships within the relevant community, it becomes “overlaid with social content” so that breaching would cause the breacher to suffer a direct psychological cost (in the form of regret, self-disappointment, and mortification) even if the breach were never discovered. Within suitably dense and

46 See David Charny, Nonlegal Sanctions in Commercial Relationships, 104 HARV. L. REV. 373, 392-93 (1990) (“The nonlegal sanction for breach of a commitment is the sacrifice of something valuable to the breaching party . . . .”).

47 The existence of such internalized sanctions for malfeasance that arise out of continuing relations has been stressed perhaps most prominently by Mark Granovetter. See Mark Granovetter, Economic Action and Social Structure: The Problem of Embeddedness, 91 AM. J. SOC. 481, 490 (1985) (arguing that personal relations and networks of such relations generate trust and discourage malfeasance); Mark Granovetter, Problems of Explanation in Economic Sociology, in NETWORKS AND ORGANIZATIONS: STRUCTURE, FORM, AND ACTION 25, 41-42 (Nitin Nohria & Robert G. Eccles eds., 1992) (proposing three extralegal reasons why “individuals might act in economic transactions as they are supposed to”: social or economic interest, moral compulsion, and normalized expectations between transacting partners). In a game-theoretic context, Peter H. Huang & Ho-Mou Wu, More Order Without Law: A Theory of Social Norms and Organizational Cultures, 10 J.L. ECON. & ORGANIZATION 390 (1994), have shown that cooperative outcomes may be sustained in static large society games when the internalized cost of cheating varies negatively with the perceived frequency
homogeneous communities, the harm to the breacher's reputation and lost future dealings with third parties that she will suffer when the aggrieved party tells others in the community about her breach may supplant the "second party" sanction of relationship termination.

Recent work in formal (that is, mathematical) game theory provides a rather general confirmation for these hypotheses regarding circumstances under which second and third party extralegal sanctions are likely to be effective. As for the sanction of terminating the relationship, it has been shown that when two parties have a sufficiently high probability of continuing their relationship and neither is too impatient, then cooperative behavior in each round they play may emerge as an equilibrium due to the credible threat to "cheat," or behave opportunistically (once or forever) if the other fails to cooperate. The force of reputational or third party sanctions has been generally confirmed by the demonstration that if "cheaters" are labelled as such within a sufficiently small community, then a community norm of cooperation may emerge as an equilibrium due to the credible threat of each member to forever punish cheaters with cheating whenever they are encountered.

It should be noted that this cooperative outcome in long-term relationships is by no means the unique (subgame perfect) equilibrium. For a reasonably accessible discussion, see Eric van Damme, Stability and Perfection of Nash Equilibria 187-95 (2d ed. 1991). More strongly, such sanctioning can be shown to support cooperation as the unique evolutionary outcome. For evolutionary approaches to this result, see generally Robert Axelrod, The Evolution of Cooperation (1984); Robert Axelrod, An Evolutionary Approach to Norms, 80 AM. POL. SCI. REV. 1095 (1986) (discussing the power of highly evolved social norms in fostering cooperation). See also Arthur J. Robson, Efficiency in Evolutionary Games: Darwin, Nash, and the Secret Handshake, 144 J. THEORETICAL BIOLOGY 379, 379 (1990) (arguing that, in the case of the repeated prisoner's dilemma, an "evolution of co-operation" is ultimately inevitable).

The general approach has been to embed repeated two party interactions within a stylized "social" or commercial framework in which members of the relevant society can identify and punish those who have failed to cooperate in a previous encounter with a different member of the society. The problem then is to identify circumstances under which the third party punishments are credible in the sense of subgame perfection. There are variations in the type of game studied, and these variations are important in explaining the viability of alternative third party sanctions as subgame perfect. See Jonathan Bendor & Dilip Mookherjee, Norms, Third-Party Sanctions, and Cooperation, 6 J.L. ECON. & ORGANIZATION 33 (1990) (presenting a game-theoretic analysis of the role of third party sanctions in facilitating cooperation); Avner Greif, Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition, 83 AM. ECON. REV. 525 (1993) (describing an economic institution which governed relationships between medieval European merchants as having successfully
One of the most important implications of this recent game-theoretic work is that the effectiveness of extralegal sanctions for noncooperative behavior does not necessarily depend upon the existence of sunk costs or relationship-specific benefits. As the need for such sunk costs or benefits is a foundational tenet of the competing, transaction cost approach developed by Williamson and a primary criticism of Eric Posner, it is worth explaining what game theory has to say about the role of sunk costs and benefits. Consider first the viability of second party sanctions. Generically, such sanctions take the form of noncooperative behavior that lowers future payoffs to the sanctioned party. One sort of noncooperative behavior—"cheating"—is fully effective and, in fact, depends upon the continuation of the relationship. It is precisely when the parties trust each other and think that they are likely to continue doing business that the threat of doing less than one has in the past (a kind of "cheating") is likely to be most effective. By the same token, severe shortfalls from expectations within the relationship may cause the aggrieved party to credibly threaten to terminate the relationship. The credibility of this threat hinges on the existence of a more profitable alternative relationship to which the threatening party might turn; its bite depends upon the difficulty that the threatened party would have in finding a comparable alternative relationship. While this is not the place for a more elaborate formal demonstration, these conditions for effective second party sanctions do not require anything like sunk

acted as a substitute for community between the traders and maintaining a sense of cooperation); cf. Glenn Ellison, Cooperation in the Prisoner's Dilemma with Anonymous Random Matching, 61 REV. ECON. STUD. 567, 568 (1994) (discussing how "contagious" punishments maintain cooperation in a large society despite informational restrictions); Michihiro Kandori, Social Norms and Community Enforcement, 59 REV. ECON. STUD. 63, 66-68 (1992) (demonstrating the existence of an equilibrium in which cooperation is sustained through contagious punishment).

See, e.g., OLIVER E. WILLIAMSON, THE ECONOMIC INSTITUTIONS OF CAPITALISM (1985). See, however, recent experimental work, reported in Steven C. Hackett, Is Relational Exchange Possible in the Absence of Reputations and Repeated Contract, 10 J.L. ECON. & ORGANIZATION 360 (1994), which suggests that distributional norms may constrain contract bargaining even when parties are anonymous.

See Posner, supra note 23.

Here, credibility is used in the sense of subgame perfection, meaning that the party would actually carry out the threat were the game to reach that stage. For an introduction to this game-theoretic notion of credibility, see KEN BINMORE, FUN AND GAMES: A TEXT ON GAME THEORY 46-51 (1992).

costs or benefits as interpreted by transaction cost theory. To the contrary, credible threats to terminate the relationship or degrade one's future performance within it in fact hinge on an asymmetry of commitment, and such an asymmetry may arise solely from informational asymmetries regarding market opportunities.

From this analysis, it follows quite directly that the viability of second party sanctions does not depend upon the existence of the sort of densely knit merchant or social community supposed by Ellickson and studied more recently by my colleague Eric Posner. Such a community may be necessary to sustain extralegal third party sanctions. But from the argument in the previous paragraph, effective second party sanctions in fact depend upon the existence of a good market or community alternative for the sanctioning party. A dense community structure in which cheating in one relationship may close off future possibilities will be inimical to a credible threat to cheat within, or terminate, a two-party relationship as a punishment when outsiders to the relationship make errors in identifying who was responsible for its breakdown. Indeed, third party sanctions substitute for, and weaken, second party sanctions whenever outsiders have worse information about performance within a relationship than those who are party to it.

Despite having all of these rather direct and important implications, the recent formal, game-theoretic work on credible extralegal sanctions has not as yet focused on the interaction between legal and extralegal sanctions; nor has it addressed the private institutional requirements for effective extralegal enforcement of contracts. This is also true of other less formal work—such as that by Coleman, Ellickson, and Elster—which has recently

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56 This is an implication of the model developed by Kandori and extended by Ellison. See supra note 49.
57 See Johnston, supra note 53.
58 For one prominent exception to this relative institutional neglect, see Paul R. Milgrom et al., The Role of Institutions in the Revival of Trade: The Medieval Law Merchant, Private Judges, and the Champagne Fairs, 2 ECON. & POL. 1 (1990).
59 For their respective contributions, see JAMES S. COLEMAN, FOUNDATIONS OF SOCIAL THEORY 119-321 (1990) (discussing social structures and how they are shaped by legal and extralegal authority); ELICKSON, supra note 54; JON ELSTER, THE CEMENT OF SOCIETY: A STUDY OF SOCIAL ORDER (1989); Jon Elster, Social Norms and Economic Theory, J. ECON. PERSP., Fall 1989, at 99, 100-15 (defining the many roles of social
explored how systems of extralegal norms may emerge and persist solely on the strength of extralegal sanctions. Still, the existing literature does provide some hints as to how written contracts might function in sustaining extralegal enforcement.

First, we should expect to find extralegal enforcement only where the parties have a prior relationship, which makes possible the second party sanctions of “cheating” or termination, or where they are part of a relatively small, homogeneous community with effective third party sanctions for breach, such as future third party refusal to deal. The viability of extralegal enforcement, however, does not by itself determine the need for a written contract and such a contract’s level of detail. Where third party enforcement is the major extralegal sanction, breach must be verifiable by someone who was not a party to, and in all likelihood did not observe performance under, the contract. For if breach is not verifiable, a system of third party enforcement that operates by punishing breachers cannot operate accurately and effectively. Hence, unless something in the nature of the contract makes breach obvious to third parties, a system of extralegal third party enforcement will require written contracts in order to be effective, with the level of detail corresponding generally to the level of complexity of the transaction.

By implication, it is only when the primary extralegal sanction for breach arises out of the parties’ own prior relationship that we should expect to see the parties dispensing with a writing (or using only a very sketchy, informal writing). As noted above, a prior relationship between the parties creates two sorts of potential extralegal sanctions. In one case, the credible threat to punish breach by discontinuing or degrading the relationship upon the detection of a breach effectively uses the possible continuation of the relationship as a performance bond. In the other case, the relationship of trust and mutual social dependence itself deters breach by, in effect, internalizing the cost of breach. These cases surely need not be distinct. In each, however, there is little or no need to verify breach to others. Rather, breach is likely to be directly observable by both parties, and the effectiveness of the sanction for breach—termination of the relationship and the psychic harm from behaving opportunistically and betraying trust—does not hinge on the existence of a detailed written contract specifying the norms and their place in promoting social and self interests).
parties' rights and obligations. Effective second party sanctions for breach would require such a written agreement only where the transaction is so complex that the parties themselves might otherwise err in measuring actual against promised performance.

B. Surveying the Evidence on Written Contracts and the Statute of Frauds

These conjectures are merely the first step toward testable hypotheses. The next step, undertaken in this section, is to enrich the theory with what the existing empirical evidence has to say. The only systematic, contemporary empirical evidence on how the Statute of Frauds affects behavior is a 1957 student note which surveyed 200 Connecticut manufacturers. The survey did not ask the sort of questions which would directly illuminate the theoretical conjectures developed above, but nonetheless provides plenty of confirming evidence.

This survey found that medium-sized manufacturers surveyed complied with the Statute of Frauds more than usual but less than always, but that larger manufacturers tended to use writings almost always, especially when demanding signed agreements from customers. Manufacturers were, on average, much less concerned with obtaining written agreements from their suppliers and were usually content with oral acknowledgments. On the other hand, manufacturers would only rely upon an oral order from a customer if they had had prior dealings with the customer. At the same time, only ten percent of the manufacturers said that they would, as a matter of practice, sue a customer who defaulted on an order, while sixty-one percent would settle for expenses incurred. From these responses, the Note concludes that manufacturers seem

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61 See id. at 1047 n.20 (defining medium-sized employers as those with between 101-500 employees and large manufacturers as those with over 500 employees, the survey found that 90% of medium-sized employers reported using signed memoranda more often than not, and an even higher percentage of large manufacturers did the same).
62 See id. at 1051, 1055 (noting that of 87 manufacturers who responded to the survey, 65 would be willing to rely upon an oral customer order some of the time, and 55 out of the 65 said they would do so only when they had had prior dealings with the customer).
63 See id. at 1061 n.64 (finding that, for all sizes of manufacturers, settling for expenses incurred by the cancellation of an order is the most popular option).
to demand a writing not because they are concerned about legal enforceability, but rather because they "deem it sound business practice to have written records."\(^{64}\)

This conclusion is appealing, in that one can well imagine that a manufacturer would wish to have written memorials of its orders, if only to ensure that the orders are timely met by producing goods to the correct customer specifications. It is, moreover, understandable that the larger the manufacturer, the larger the number of orders it may have and hence the greater the need for accurate and complete written records. That a large, multifaceted, and complex business has need of written records simply in order to carry on business in an efficient manner seems unquestionable. But size alone does not explain why manufacturers demand a writing when dealing with customers but not when dealing with suppliers. Oddly, the survey did not ask the respondents why they demanded a writing in some dealings but not others. A very strong clue to this pattern, however, is given by the fact that almost all of the manufacturers who said they sometimes would not demand a writing from a customer would do so only when they had a continuing relationship with the customer.\(^{65}\) This response strongly suggests that among the sample respondents, manufacturer-supplier relationships were at this time typically close and continuing, whereas manufacturer-customer relationships were not. This suggestion raises the hypothesis that writings were believed to be necessary only when dealing with a new or non-repeat player. Even on this hypothesis, the need for a writing when dealing with non-repeat players is not clear. It may be that repeat customers have such well-understood buying patterns that a single writing will suffice as a continuing reminder of specifications and other requirements. On the other hand, manufacturers may demand a written order from new or non-repeat customers because they do not trust such customers. Regardless of the explanation for lack of trust in non-repeat relationships,\(^{66}\) it is at least plausible that such distrust would make manufacturers anxious to ensure that the threat of a lawsuit for breach is at least potentially viable.

\(^{64}\) Id. at 1064.

\(^{65}\) See id. at 1055 (noting that of the 65 manufacturers who said that they would be willing to rely on an oral customer order some of the time, 55 said that they would do so only if they had had at least occasional dealings with the customer).

\(^{66}\) See supra notes 21-23 and accompanying text (noting the significant increase in use of writings when the parties are "strangers").
In defense of the Note's conclusion, it might be argued that the need to ensure a viable lawsuit for breach is ruled out as an explanation for the use of a writing in non-repeat manufacturer relationships by the survey finding that only ten percent of the manufacturers make it a practice to sue for buyer default. However, this argument confuses two strategically distinct actions: suing "as a matter of practice," and using the viable threat of a lawsuit as a way to gain leverage in informal, extralegal settlement. The survey evidence is completely consistent with a manufacturer strategy of only occasionally suing defaulting customers in order to build a reputation for toughness that will make future defaulters uncertain enough about suit to take the threat seriously and settle on the manufacturer's terms.\(^6\) Even if the manufacturer community were dense enough so that information about a defaulting buyer would quickly become known by other manufacturers, outright refusals to deal with such a customer by other manufacturers seem a costly and unlikely way of sanctioning buyer default, especially when the circumstances causing the buyer's default—for example, a sudden and unexpected exogenous change in demand for the buyer's product—may make it more than likely that the buyer would perform as promised under more normal circumstances.\(^6\) It may be that there are so many potential customers that any known defaulter will be excluded in equilibrium, but a more likely outcome is that such behavior will trigger the threat of a lawsuit. If this is so, then it will be important for manufacturers to ensure that such a threat is viable, and a written agreement may well be perceived to improve the chances of viable suit.

Because it did not ask manufacturers why they required written contracts in non-repeat transactions, the 1957 Note does not present evidence allowing one to test the hypothesis that writings

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6 This is the kind of reputation building under incomplete information when facing a sequence of non-repeat players modelled by Kreps, Roberts, Milgrom, and Wilson. See David M. Kreps et al., Rational Cooperation in the Finitely Repeated Prisoners' Dilemma, 27 J. ECON. THEORY 245 (1982) (demonstrating how reputation effects can motivate cooperation between "strangers").

6 This is to argue that the sort of contagion equilibrium discovered by Kandori and refined by Ellison is unlikely under incomplete information regarding the state of nature that obtained for previous plays of the game. See supra note 49. Note that it is not incomplete information about player type which destroys such equilibria, but rather uncertainty regarding the prior realized state of nature that does so. If there are states of nature in which the classical Prisoner's Dilemma cooperative outcome is in fact Pareto inferior to non-cooperation (that is, no trade), then the game is effectively not a Prisoner's Dilemma in some states.
are used in interactions among non-repeat players in order to ensure the viability of legal action. There is, however, a very large body of historical evidence that tends strongly to confirm this hypothesis. Perhaps the most detailed such evidence is found in Bruce Mann’s account of the changing patterns of debt litigation in colonial Connecticut between the late seventeenth and mid-eighteenth centuries. Mann found that in the earlier years of this period, debt litigation between both merchants and townsmen consisted primarily of actions based on “book debt,” which was a very simple recording in merchants’ or shopkeepers’ books of payments made and owed without any explicit promise to pay. In suits based on “book debt,” the books themselves “were not conclusive evidence of the debts they recorded,” and a broad range of parol evidence was relevant, allowing inquiry into the full range of relations between the litigants. Mann argues that reliance on the highly informal and incomplete record of agreement provided by “book debt” was rational under social conditions in which repeated and continuous interaction—whether among neighbors in small, isolated towns or among merchants in larger towns—generated strong ties of interdependence and trust. The range of evidence considered in “book debt” suits was appropriate to the ultimate goal of such suits, which was to air the whole context of the parties’ social relations and thereby reconcile neighbors who had no option but to continue to deal with one another. In the first half of the eighteenth century, however, Connecticut experienced a rapid expansion of trade, economic specialization, and agricultural commercialization coupled with dramatic increases in population density. With these economic changes, commercial exchange

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69 See BRUCE H. MANN, NEIGHBORS AND STRANGERS: LAW AND COMMUNITY IN EARLY CONNECTICUT 2 (1987) (explaining that the book’s purpose is to understand the changing role of law in society from the mid-seventeenth century to the American Revolution).

70 See id. at 12 (discussing the somewhat risky nature of book debts for which the law implied a promise to pay and noting the continued reliance on this system until as late as the 1720s).

71 See id. at 22-23 (explaining the assumption by courts of the period that each “book debt” case was unique and that the results were highly contingent on all of the surrounding circumstances).

72 See id. at 15, 23 (arguing that trust was a critical component of these commercial transactions and noting how the social context of ongoing relationships enhanced the level of trust between the parties).

73 See id. at 23-26 (concluding that the informality of “book debt” litigation “allowed the parties to use the litigation to let off steam”).

74 See id. at 31-32 (discussing the changes in Connecticut’s economy after the
became more impersonal, even as social relations remained communitarian and the new impersonal exchange required uniform and certain written instruments by which credit transactions could be evidenced. Unlike "book debt," "[a]ctions on written instruments did not admit the range of evidence" allowed in actions on "book debt." Proof focused on a single transaction rather than a course of dealing, reflecting altered economic conditions "in which credit was no longer something that grew from transaction to transaction," but rather "something extended in single transactions in return for formal admissions of liability." "Book debt" positively invited litigation; by contrast, debtors after 1730 never contested more than ten percent of the actions on written instruments against them. Thus, the informality of the "book debt" system which prevailed under conditions involving long-term relationships ultimately gave way to more formal written instruments as commercial exchange grew more complex and impersonal.

Of special significance for present purposes, however, is Mann's finding that during this period of rapid economic change and increasingly impersonal exchange, it was in the larger, developed urban towns such as New London and Norwich that "book debt" remained dominant and litigation frequent. The explanation, says Mann, is to be found in the fact that the larger towns had concentrated central business districts in which merchants and other business people were part of complex, closely related and recurring transactions, both with each other and with distant traders and suppliers. Within the community of merchants, customary ways of doing business, characterized by a high degree of trust and

introduction of paper currency in 1709).

75 See id. at 35-37, 43 (listing the advantages of formal written debt instruments in an expanding economy).
76 Id. at 34.
77 Id. at 40.
78 Mann notes that during the heyday of "book debt," debt actions between neighbors made up the vast majority of litigation in his sample. See id. at 17 ("Almost 90 percent of all book debt actions filed in the Hartford County Court in 1700 were between residents of the county. In 60 percent of the cases, both debtor and creditor lived in the same town.").
79 See id. at 172 app. (calculating that in the 1730s, the percentage of contested actions based on written instruments dropped to 4.4% from 29.2% in the 1720s and approximately 40% in the preceding two decades).
80 See id. at 56 (finding that book debt was more "suited to communal settings" such as those found in large urban towns that were centers of credit).
81 See id. at 60 (describing the central business districts of New London and Norwich).
informality, had always existed and for such merchants "book debt" continued to be adequate.\textsuperscript{82} More generally, even though residents of the new commercial towns were much less interdependent on the whole than residents of the country towns, "their commercial relations were well developed and likely to be continuing."\textsuperscript{83} Towns had strongly developed commercial communities characterized by the same sort of trust that had made "book debt" viable at an earlier time in the country towns.

Mann's findings are supported by other studies. In a recent study of civil litigation patterns in a single local English jurisdiction between 1683 and 1686, economic historian Craig Muldrew found that the bulk of litigation involved suits based on informal, oral credit transactions involving repeat litigants.\textsuperscript{84} He concludes that because "most people lived in very close proximity there would have been a great deal of personal familiarity in commercial dealing," and that the extension of credit on the basis of oral contracts evidenced how "[a]ll had to trust and also be trusted, and [how] accessibility to the court was needed to maintain this trust."\textsuperscript{85}

Similar evidence is provided by a study showing how in the early frontier days, merchants in Massachusetts financed cod fishermen by recording debts on book and carrying loans to individual fishermen for a number of years in exchange for the fishermen's commitment, enforceable via the threat to terminate credit and call in the outstanding debts, to borrow and buy on credit only from a particular merchant.\textsuperscript{86} As the seaport world became increasingly anonymous due to population growth during the mid-eighteenth century and local capital and labor markets became more reliable, merchants assumed the entire risk of fishing voyages and no longer

\textsuperscript{82} See id. at 43 (explaining that continuing mercantile relationships could have been harmed by more formal instruments). For a discussion of merchant customs during this period, see generally WILLIAM T. BAXTER, THE HOUSE OF HANCOCK: BUSINESS IN BOSTON, 1724-1775 (1945).

\textsuperscript{83} MANN, supra note 69, at 60-61 (emphasis added) (comparing the composition of and relationships within county towns and emerging urban centers).

\textsuperscript{84} See Craig Muldrew, Credit and the Courts: Debt Litigation in a Seventeenth-Century Urban Community, 46 ECON. HIST. REV. 23, 25 (1993) (noting that 83% of the suits brought were "trespass on the case" which concerned "agreements which only had the status of oral contracts at law").

\textsuperscript{85} Id. at 36.

\textsuperscript{86} See Daniel Vickers, Merchant Credit and Labour Strategies in the Cod Fishery of Colonial Massachusetts, in MERCHANT CREDIT AND LABOUR STRATEGIES IN HISTORICAL PERSPECTIVE 36, 39 (Rosemary E. Ommer ed., 1990) (explaining that although "client fishermen might occasionally try to spread their affairs around, they did so at some peril to the special relationship with their patron merchants and, therefore, rarely").
advanced credit to the fishermen. With the disappearance of the credit, fishermen and merchants no longer had long-term relationships. Enforcement of the older informal debt obligations evidenced by book accounts became too risky once the old continuing relationships had been replaced by new, anonymous transactions and such contract forms disappeared.

Mann's explanation of the superficially puzzling persistence of informal "book debt" in larger commercial Connecticut towns during the eighteenth century is supported by many other historical studies of contracting practices among merchants. These studies clearly demonstrate that members of small, closely connected merchant communities with a long and continuing pattern of repeated commercial interaction trusted a merchant's stake in his reputation as a guarantee of performance and good faith rather than contractual formalities such as written agreements. In Ray Westerfield's classic study of English middlemen during the same period studied by Mann, he found that neither formal contractual devices such as bonds, nor organizational structures or accounting formalities proved effective at controlling fraud and other opportunistic behavior by foreign factoring agents. The problem of opportunistic behavior by agents abroad was dealt with successfully only through the evolution of a norm in which merchants mutually acted as factors for one another, with a merchant's reputation for honor and trustworthiness constituting the bond against opportunism.

Contemporary accounts similarly support the thesis that contractual formalities such as written agreements are often dispensed with within continuing commercial relationships among

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87 See id. at 44 (discussing the gradual movement away from long-term relationships between merchants and fishermen during the period from 1675-1725).
88 See id. at 46 (analyzing the effects of the disappearance of credit relationships on the ability of fishermen to remain self-employed).
89 See RAY B. WESTERFIELD, MIDDLEMEN IN ENGLISH BUSINESS, PARTICULARLY BETWEEN 1660 AND 1760, at 356-58 (1915) (describing a variety of clever means by which the foreign factors defrauded their principals).
90 See id. at 359-60 (explaining the development of international confidence and trust among merchants with similar practices). A related response to the risk of opportunism was conducting overseas operations by placing family members in charge of foreign branches. See STANLEY CHAPMAN, MERCHANT ENTERPRISE IN BRITAIN: FROM THE INDUSTRIAL REVOLUTION TO WORLD WAR I, at 93-97 (1992) (finding that merchants employed members of their families, or extended families, because this was the only way to have confidence in their "correspondants' discretionary decision making" when communication was slow and difficult).
members of a defined commercial or merchant community. Coleman cites the community of City of London merchant bankers as one in which a high level of trust obviates the need for lawyers and written contracts even in very large transactions. Coleman theorizes that mere verbal agreements suffice in such a community because there is a community norm of dealing only with the most reputable bankers and reputation for trustworthiness (or its converse) is quickly communicated within the community of potential future transactors. Lisa Bernstein has described the standard transactional model in the New York diamond industry as one in which a "handshake accompanied by the words mazel u'broche creates a binding agreement." Written offers—scrawled on the back of an envelope containing the diamonds for sale—are sometimes made in lieu of the handshake deal and both oral agreements and those made via the written offer are typically concluded with a signed official weight slip. Still, these writings are relatively sketchy, and the well-established diamond industry norm is that a handshake binds. Disputes between members of the diamond industry club are arbitrated rather than litigated. Bernstein explains this industry's reliance on extralegal contracts by the density of its social structure. This permits members to obtain information on each other's reputations at very low cost and to post effective "reputational bonds" against contract breach. In such a setting, contract formation requires only enough formality so that other members of the trade can determine that there was in fact an agreement.

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91 See James S. Coleman, Systems of Trust: A Rough Theoretical Framework, 10 ANGEWANDE SOZIALFORSCHUNG 277, 286 (1982).
92 See id. at 287 (stating that "among merchant bankers [concern with reputation] is not a matter of abstract morals but pure self-interest: a merchant banker would never be trusted, i.e., nevermore be allowed to participate in the flow of credit, if his integrity in keeping agreements was not trusted, and his business would rapidly decline if his investment judgment was not trusted").
94 See id. at 122-23 (describing a system in which a buyer makes an offer by placing a stone in a precisely sealed envelope on which the buyer writes the terms and conditions of the offer).
95 See id. at 119-20 (noting that as a condition to joining the New York Diamond Dealers Club, a dealer must agree to submit all disputes with other members arising from the diamond business to the club's arbitration system).
96 See id. at 132-35 (noting that the diamond industry is organized to minimize information costs pertaining to dealers' reputations).
97 See id. at 133 (arguing that handshakes, cachets, weight slips, and bills of sale
This general empirical evidence puts the reported Statute of Frauds decisions in a context within which it is possible to set up some hypotheses regarding their implications for the general behavioral significance of the Statute. The empirical evidence is consistent with the game-theoretic conjecture that detailed written instruments will tend to be the norm in anonymous transactions among non-repeat players, even when transactions are relatively simple. This is not to suggest that such written instruments will in fact evidence a bargained-for agreement. As observed by Mann in the historical context and by many others in more contemporary settings, standardized written forms often signify a transactional setting that by its very anonymity and standardization precludes individualized assent. Still, the theory suggests that a writing will be used most by parties who do not have a history of prior dealings. Without such a history, the parties must rely either on legal enforcement or extralegal third party enforcement, and to be effective, either of these types of contractual enforcement require accurate verification of allegations of breach. The kind of writings necessary to verify breach to other members of the trade or business community might differ markedly from what is required by the Statute of Frauds, although Llewellyn’s requirement of “some writing” may be viewed as a sensible attempt to lessen the disparity between what other contracting parties need to verify breach and what the law requires. On this view, contractual complexity ought to influence the complexity of the writing, but ought not to have a great affect on the need for a writing qua verification instrument.

When, by contrast, the parties have a history of prior dealings that has established a basis of trust and/or a significant prospective future advantage to each in the continuation of the relationship, one would expect that relationship-specific sanctions for breach will be predominant. In such relationships, there is little ex ante expectation of the future need to verify breach to others outside the

supply the requisite degree of formality).

98 See MANN, supra note 69, at 45 (noting that even in the first half of the eighteenth century the “formal rationality that made credit instruments so useful in a commercial economy did not, and could not, admit individual, differential treatment”).

relationship, so that a low level of contract formality and, in particular, a low level of compliance with the formal requirements of the Statute of Frauds should be expected within such relationships. Here, contractual complexity might create the need for a written record where the need for an effective sanction for breach would not. It might well be necessary for busy parties engaged in a number of complex transactions at any one time to prepare written contracts, if only for their own purposes in observing and monitoring contractual performance.

If the threat of extralegal sanctions is effective within such a social world of repeated relationships, then few if any reported decisions raising section 2-201 issues should involve parties from such a community. This reasoning suggests that most reported decisions should involve non-repeat transactions among relatively anonymous parties. However, as argued above, both theory and evidence suggest that parties involved in such non-repeat transactions will take precautions to ensure that their agreement complies with the formalities requisite to legal enforceability, simply because legal enforcement is important in such non-repeat transactions. Thus, in disputes involving discrete, non-repeat transactions, section 2-201 issues should rarely arise. Paradoxically, a theory intended to explain my sample of reported Statute of Frauds decisions seems to imply that there should not be any reported decisions. Disputes involving repeat players should not result in reported decisions because extralegal sanctions take care of enforcement problems; but neither should disputes involving non-repeat players generate reported decisions (especially not appellate decisions) under section 2-201 because the players involved in such relationships should have been careful to comply with formalities such as the requirement of an adequate writing.

D. Testing and Refining the Theory of Reported Statute of Frauds Decisions

My survey of volumes 18-23 of the UCC Reporting Service Second reveals thirty separate disputes generating decisions that are digested under section 2-201. Of these decisions, only twenty-four can fairly be characterized as cases in which there was a live, litigated issue under section 2-201.100 Out of this base sample of

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100 The Appendix contains a table of all 30 disputes coded along the various dimensions discussed supra. As can be seen from reliability checks
decisions involving actively litigated Statute of Frauds issues, nine clearly indicated a history of prior dealings between the parties (or dealings between closely related entities, as between a partnership and a partner). Fourteen decisions in the sample contained no indication of any previous dealings or relationship between the parties.101

1. Explaining Cases with No History of Prior Dealings

The simple theory elaborated above fails to predict the litigation of so many section 2-201 disputes. A closer look at the sampled section 2-201 decisions reveals why and suggests a broader theory that does succeed in explaining the observed pattern of reported section 2-201 decisions. Consider first those decisions where the facts indicated that the parties had not dealt with each other before and were strangers to each other. The first fundamental feature of these "stranger" disputes is that in all but one such case the parties did have a writing and in most cases, many writings. In all of the "stranger" cases with a writing (save one), the court found that the Statute of Frauds applied and determined the statutory sufficiency of the writing in a way that was true to the business practice among strangers of requiring a writing. Of these fourteen decisions, ten of them directly involved the issue of whether the parties had an agreement; in the other four cases, the Statute of Frauds issue was a marginal, throw away argument made in the context of a dispute over the terms of the agreement.

Jones v. Wide World of Cars, Inc.102 constitutes a case of the former, no-agreement sort. In that case, the putative buyer wired a $50,000 deposit on a Ferrari and the seller then mailed the buyer a purchase order that explicitly stated: "THIS AGREEMENT IS NOT BINDING UNLESS SIGNED BY THE SELLER AND THE

101 One case, Christensen v. Ransom, 844 P.2d 1349 (Idaho Ct. App. 1992), could not be clearly coded as having or not having a history of prior dealings. Interestingly, this case presented strong evidence that the parties were part of a network of interlocking social relations. Another case, American Dredging Co. v. Plaza Petroleum Inc., 799 F. Supp. 1335 (E.D.N.Y. 1992), generated two separate opinions and was coded only once.

The buyer did not sign and rejected the purchase order on receipt, allegedly because the price it stated was too high. The court held that the buyer's down payment could not substitute for a writing to evidence agreement and said that the down payment in such a transaction was a signal of the buyer's seriousness rather than of his irrevocable commitment. The court found that in such a context, the buyer was not bound prior to fulfilling the statutory requirement of a signed writing. This decision illustrates the Statute of Frauds functioning as intended—that is, acting to prevent a party from asserting that there was an agreement when in fact there was none (assuming that the court is correct in its standard interpretation of the significance of the buyer's deposit in the given context). By contrast, the decision in Figueroa v. Kit-San Co. involved a complex series of writings and issues of formation under section 2-207 and mentioned the Statute of Frauds issue only tangentially in commenting that the parties had admitted the oral contract in their pleadings and did not dispute that the buyer ordered the material and that the seller had delivered.

The sample of reported Statute of Frauds disputes among strangers thus displays two types of cases: those in which the Statute of Frauds argument is central to the court's decision whether the parties had actually reached agreement and those

103 Id. at 134.
104 See id. (noting that the buyer claimed he rejected the purchase price because it indicated a price of $800,000 that was allegedly at odds with the seller's oral representations and its advertising).
105 See id. at 137 (positing that New York law "precludes use of down payments for automobiles as a substitute for a written contract signed by the buyer").
106 See id. ("A consumer putting down a payment is making a monetary sacrifice and showing good faith seriousness to encourage the seller to take the potential sale seriously and to hold the goods.").
107 See id. (observing that "ordinary public expectation would be flouted by a ruling that one who puts money down, becomes committed to a transaction for which the details have yet to be established").
109 See id. at 574 (noting that the formation of an oral contract was undisputed and the dispute was over the terms of the contract).
110 See Nucor Corp. v. Aceros y Maquilas de Occidente, S.A. de C.V., 28 F.3d 572, 586-88 (7th Cir. 1994) (finding that no authorized agent for the manufacturer ever signed the buyer's written order and that the agreements between a middleman and the buyer did not bind the manufacturer); L.J.R. Ryan v. Wersi Elec. GmbH & Co., 3 F.3d 174, 180-82 (7th Cir. 1993) (finding that detailed letters and draft written proposals were sufficient as a confirmation of the agreement but finding that the agreement was too indefinite to enforce); Akrosil Div. of Int'l Paper Co. v. Ritrama
in which the Statute of Frauds issue is merely part of a general shotgun blast by the defendant—a blast aimed primarily at other issues involving formation or interpretation.\(^\text{111}\)

Since a decision by the court that the writings in question are insufficient to satisfy the Statute of Frauds effectively defeats the plaintiff’s contract claim, it is not surprising that the argument is sometimes a marginal part of the overall defense. It is, moreover, a purely legal issue that can be raised and litigated at very low marginal cost; even a small probability of success would justify incurring such small marginal cost. As for the cases involving more substantial use of the Statute—those where the sufficiency of the writings goes to the core issue of whether there was an agreement as alleged—these cases are precisely what the Statute was intended to cover. My reading of the ten decisions involving such use of the Statute is that in every such case, the court's

\(^{111}\) See Magallanes Inv., Inc. v. Circuit Sys., Inc., 994 F.2d 1214, 1219-20 (7th Cir. 1993) (finding a formation norm in the shipping brokerage trade to be an exchange of telexes followed by a written memorandum of agreement and thus deeming telexes to be sufficient under the Statute of Frauds); In re MSR Exploration, Ltd., 147 B.R. 560, 570 (Bankr. D. Mont. 1992) (focusing the analysis on an interpretation of a contract between the parties rather than the Statute of Frauds issue); Figueroa v. Kit-San Co., 845 P.2d 567 (see supra notes 108-09 and accompanying text); Dixon v. Roberts, 853 P.2d 235, 238 (Okla. Ct. App. 1993) (deeming the Statute of Frauds issue to be marginal where the seller sent a letter summarizing phone conversations in which the option to purchase ostriches was offered and accepted).
decision correctly mirrored the actual significance of having a writing. This is not merely a tautological expression of an underlying assumption that the transactional norms governing dealings between non-repeat, sophisticated players dictate that there is no agreement until such a writing. It is instead consistent with the general pattern of writings used by the parties in the particular cases, a pattern obviously subject to the court's rhetorical abilities in opinion-writing, but which is nonetheless striking in its consistency.

A close look at the sample of stranger Statute of Frauds reported decisions thus tends not to undercut, but rather to strongly confirm the theory elaborated above. Sophisticated strangers contract via quite formal writings, and the determinative Statute of Frauds issue in cases involving such parties is not whether a contract can exist and be enforced without a writing, but whether the writings are sufficient to satisfy the statutory requirements. As predicted, legal enforceability seems important in this context and Statute of Frauds issues arise precisely as they should, given the underlying purpose of the writing requirement, as marginal but quite rational attempts to evade enforcement.

2. Explaining Cases with a History of Prior Dealings

A stark contrast emerges when one takes a close look at the nine sampled Statute of Frauds decisions involving a pattern of prior dealings between the parties. In six of these cases, it is quite clear that the parties did not have a written contract. None of these decisions involved the sufficiency of the parties' writings; all of them involved instead the issue of whether one of the statutory exceptions applied so that a contract could be found despite the informality of the parties' dealings—despite their failure to have a writing. Such decisions strikingly confirm the theoretical prediction that parties enmeshed in long-term, continuing patterns of dealing ought to be rather indifferent to the requirements for legal enforceability.

In confirming the theoretically predicted relative informality in repeat-player settings, the sampled cases suggest that indifference to legal formality is a function of the strategic nature of the parties' dyadic relationship, rather than their sophistication or

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112 As noted in the Appendix, there was virtual 100% reliability in the coding for whether or not there was a writing.
membership in a clearly defined "merchant" community. For instance, in *Buffaloe v. Hart*, the plaintiff tobacco farmer, who had known the defendants for ten years and had previously rented tobacco barns and bought equipment from them, testified that "we always done it on a handshake agreement, cash basis. That's the way it was." The parties then agreed, while standing in defendant's front yard, that the plaintiff would purchase the barns, and this too was accepted with a handshake. The court held that there was sufficient evidence of "acceptance" to bring the case within an exception to the Statute of Frauds. It found evidence of agreement in testimony by a number of town residents that the plaintiff had told them he had bought the barns, by an auctioneer that plaintiff had contracted with him to sell the barns, and by a repair man the plaintiff had hired to fix the barns.

The same sort of informality found in dealings between the relatively unsophisticated parties in *Buffaloe v. Hart* is also found when more sophisticated players are in a long-term relationship. In *Atlantic Paper Box Co. v. Whitman's Chocolates*, a candy box manufacturer which had done about forty percent of its business over a period of several years with Whitman's Chocolates received phone orders totalling over one million dollars along with a request that it reserve capacity to accommodate likely additional orders and an assurance that Whitman's was not a takeover target. When Whitman's was acquired and the new company reneged on the deal, Atlantic sued to enforce the contract and the court held that allegations of a course of dealing where the contract was made without a writing were sufficient to avoid the Statute of Frauds. The other cases depicting parties with a prior relationship and no writing involve similar reasoning by the court in finding an exception to the Statute.

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113 441 S.E.2d 172 (N.C. Ct. App. 1994).
114 *Id.* at 173.
115 *See id.*
116 *See id.* at 176.
117 *See id.*
119 *See* Dawkins & Co. v. L & L Planting Co., 602 So. 2d 838 (Miss. 1992). An experienced cotton planter with over 4200 acres in combined cultivation and a cotton buyer had a longstanding (10 to 15 years) relationship during which they had typically concluded forward contracts over the phone. According to the deposition of the cotton buyer,
In the three cases involving parties with prior dealings who did have written contracts, one involved a very sketchy written contract among close associates, and in this case, like those without a writing, the court found a statutory exception. The other two cases in which parties with prior dealings used written contracts involved a relatively complex distributorship agreement, where the appellate court rejected the decision of the lower court to raise, sua sponte, the Statute of Frauds issue despite the existence of a signed writing, and a fuel oil purchase that involved battle of the forms type warranty and damage limitation issues but which was concluded via telex (and hence might well be viewed as not being in writing at all). These latter two cases confirm the theoretical prediction that writings will be observed in relatively complex transactions between parties with repeat dealings.

Mr. Love [the seller] usually when he got ready to sell his cotton he would call me. He told me from time to time: "No need in bugging me or bothering me or soliciting my business. When I'm ready to sell, I'll call you." And this was the sort of relationship we cultivated through the years.

Id. at 840. In August, 1986, the planter called and said "you've been handling my cotton for 10 or 15 years. You know I'm going to have a lot of middling cotton." The planter continued "If you can get that close to 60 cents, then you've got my cotton. Consider it sold." Id. When the planter's son, and business partner, refused to execute this final contract, the buyer sued, and the court found that the merchant exception to § 2-201 applied to bind the planter. See id. at 843; see also Steege v. Affiliated Bank/North Shore Nat'l (In re Alper-Richman Furs, Ltd.), 147 B.R. 140, 148 (Bankr. N.D. Ill. 1992) (finding no need for a writing in a case involving an unwritten consignment sales agreement because the parties had performed the agreements); Hurwitz v. Prime Communications, Inc., 23 U.C.C. Rep. Serv. 2d (Callaghan) 1213 (Mass. Super. Ct. 1994) (deeming Statute of Frauds inapplicable in case involving an alleged unwritten agreement to confer additional increased salary and relying instead on promissory estoppel when plaintiff was fraudulently induced to forgo a portion of her salary in return for promise of later benefits); D.A. Elia Constr. Corp. v. Lyco, Inc., 18 U.C.C. Rep. Serv. 2d (Callaghan) 1049 (W.D.N.Y. 1991) (enforcing contract under principle of promissory estoppel based on confirmatory memo sent by general contractor to subcontractor).


See Wells, Waters & Gases, Inc. v. Air Prods. & Chems., Inc., 19 F.3d 157, 161-63 (4th Cir. 1994).

3. Explaining the Use of Written Contracts: Some Econometric Evidence

The informal evidence recounted thus far tends to strongly confirm the theoretical prediction that parties with an established history of doing business with each other ought to largely eschew contract enforcement formalities such as the Statute of Frauds writing requirement. Nothing has been said, however, about transactional complexity as a competing explanation for when and why parties use written contracts. This section presents some statistical results which suggest that it is the relationship variable (that is, whether or not the parties have a history of prior dealings) and not transactional complexity that best predicts and explains their use of written instruments.

The sample consists of twenty-three observations. Each observation is a coded case, and the coding of each case is given in the Appendix. The dependent variable is WRITE, a binary variable that takes the value "1" if the case is coded as one in which the parties used any writing to negotiate and draft their contract and "0" if they did not. The explanatory variables are "PRIORD," and "ITRANS2" and "ITRANS3." The variable PRIORD takes the value "1" if the case is coded as depicting parties with a history of prior dealings, and "0" if there is no such history. Transaction complexity was coded at three levels: "simple," "moderate," and "high." ITRANS2 is a dummy that takes the value "1" if the transaction is coded as moderately complex; ITRANS3 is a dummy that takes the value "1" if the transaction is coded as simple. The cases were coded by myself and three research assistants. As displayed in the Appendix, coding reliability—roughly, the extent of agreement across coders in their coding decisions—was very high for the WRITE dependent variable. It was not so high for the complexity variables, and the PRIORD variable, but still generally within the range of what is considered acceptable in qualitative research of this sort.¹²³

One way to get some sense of the relative importance of the various explanatory variables is through a simple correlation

¹²³ For a general discussion of reliability and other criteria of data acceptability in qualitative research, see Gary King et al., Designing Social Inquiry: Scientific Inference in Qualitative Research 23-27 (1994). For a more detailed discussion of reliability, including the consistency-type measures displayed in the Appendix, see Edward G. Carmines & Richard A. Zeller, Reliability and Validity Assessment 43-47 (1979).
analysis. Such an analysis, depicted in Table 1 below, shows that both prior dealings and transaction simplicity are quite strongly negatively correlated with the use of a writing. These qualitative relationships are as predicted, as is the positive correlation between moderate transactional complexity and the use of writing. At the same time, there appears to be little if any collinearity between the dummies for transaction complexity and the prior dealings variable.

\[ \text{Table 1} \]
\begin{center}
\begin{tabular}{|c|c|c|c|}
\hline
 & WRITE & PRIORD & INTRANS2 & ITRANS3 \\
\hline
WRITE & 1.000 & & & \\
PRIORD & -0.537 & 1.000 & & \\
INTRANS2 & 0.215 & 0.054 & 1.000 & \\
ITRANS3 & -0.387 & 0.102 & -0.479 & 1.000 \\
\hline
\end{tabular}
\end{center}

The lack of collinearity between the complexity variables and the prior dealings variable is reassuring in performing the next step in the quantitative analysis, which is to perform a logit regression of WRITE on the vector of explanatory variables. While a full discussion is obviously beyond the scope of the present Article, the basic idea behind a logit analysis is to treat a dichotomous left hand side variable such as WRITE as a probability (here, the probability of a writing) which is explained by various factors. That is, even if the model presumes that whether the parties use or do not use a writing is a deterministic choice variable, the econometric specification of the problem allows for randomness in the sample and/or model incompleteness. The logit multiple regression allows the statistical significance of the various explanatory variables to be independently identified and tested. The results of such a regression are presented in Table 2. As indicated by the table, the sign on the coefficient for the prior dealings variable is as predicted, in that prior dealings lower the probability that we will observe the use of a writing in contract

\[ \text{\underline{124 For such discussions, see, for example, \textit{Peter Kennedy, A Guide to Econometrics} 228-46 (3rd ed. 1992), or J.S. Cramer, \textit{The Logit Model: An Introduction for Economists} (1991).}} \]
formation. Moreover, only the PRIORD variable is statistically significant at the conventional five percent level. None of the complexity variables are statistically significant, although all (including the constant) are of the predicted sign. Of the complexity variables, high complexity would seem (through the constant) to be the most important, positive factor favoring a writing.

**TABLE 2**

|        | Coefficient | Standard Error | z     | Pr > |z| |
|--------|-------------|----------------|-------|------|---|
| PRIORD | -3.02       | 1.33           | -2.256| 0.024|
| ITRANS2| 0.837       | 1.39           | 0.600 | 0.54 |
| ITRANS3| -2.233      | 1.754          | -1.28 | 0.20 |
| Constant| 2.07        | 1.21           | 1.709 | 0.08 |

Chi-Squared = 10.66, with 3 degrees of freedom significant at 0.014 level
Log Likelihood = -9.531

As one would expect with such a relatively small sample test, all of the standard errors are relatively large. Caution must be exercised in interpreting these results as a refutation of complexity as an explanation for the use of a writing, if only because of the difficulty in obtaining reliable measures of transactional complexity. Still, the regressions are useful in allowing one to separate the effects of the strategic nature of the parties' relationship from the effects of transactional complexity. In this regard, they suggest that at least in my sample, the parties' history of prior dealings is an important and statistically significant explanation for their decision whether to use written instruments in contract formation.

**E. Explaining Statute of Frauds Litigation**

The theory developed above predicts what my admittedly small sample displays: informal contract formation between players in continuing relationships. But the theory also predicts that such decisions ought not to arise at all. Perhaps the most direct explanation of why disputes arising out of long-term relationships result in litigation is that these disputes are litigated only when the assumptions underlying the effectiveness of extralegal sanctions are
The assumptions may fail in a variety of ways. If the primary extralegal sanction for contract nonperformance is the adverse effect on market or community-wide reputation that such nonperformance would create (third party sanctions), then such sanctions may have little teeth if one of the parties is new to the community and unfamiliar with its norms of informal dispute resolution. Such a neophyte may simply make an error, and refuse to settle, triggering a pattern of future sanctions—in the form of refusals to deal, or in the form of much less favorable terms—the magnitude of which she seriously underestimated. Similarly, as Mark Ramseyer has conjectured, a business entity that is small and not well known will not have sufficient “reputational capital” at stake, making reputation alone insufficient as a performance bond. At the other end of the life cycle, one of the parties may soon exit the community, and hence no longer concern herself with reputation, making litigation the only effective enforcement device.

None of these reasons why third party sanctions may be ineffective directly addresses the conclusion drawn from my sample, which is that litigation occurs even when the parties have the sort of longstanding relationship that should make second party enforcement effective. The game-theoretic account of second party enforcement provided earlier does, however, suggest several reasons why litigation may occur even when the contracting parties initially thought that second party enforcement would preclude litigation. The simplest of these reasons is that the factors making for effective second party sanctions are not present despite evidence of a prior relationship. If, for instance, the parties never expected the relationship to continue, or neither was at particular risk of loss within the relationship, then termination and litigation may have been anticipated from the outset.

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125 When economic expansion brought an influx of newcomers into Connecticut merchant ranks, there was a sharp increase in the rate at which informal commercial arbitration failed, and it was against this background of increasing failure that merchants pushed for the first time for statutes making promises to arbitrate and arbitration awards formally enforceable at law. See MANN, supra note 69, at 126-28.

126 See J. Mark Ramseyer, Legal Rules in Repeated Deals: Banking in the Shadow of Defection in Japan, 20 J. LEGAL STUD. 91, 96-97 (1991) (discussing several reasons why legal rules matter even in markets, such as Japanese banking, where it is believed that contracts are enforced more by social norms than legal sanctions).

127 Empirical support for this explanation is provided, somewhat paradoxically, by Thomas M. Palay, Comparative Institutional Economics: The Governance of Rail Freight Contracting, 13 J. LEGAL STUD. 265 (1984). Palay conducted 35 interviews with rail freight shippers and carriers involved in 51 transactions. Many of these transactions
A second, and somewhat less straightforward, situation in which litigation may ensue despite an ex ante perception that second party sanctions would suffice is when the relationship itself is terminated for reasons exogenous to the relationship. If, for instance, one of the parties goes out of business, or is expected to go out of business, the possibility of future dealings no longer exists (or is much less likely), and so the threat to terminate or degrade the relationship is no longer adequate to insure cooperative behavior within the relationship. There is no reason not to litigate disputes that arise in the context of relationships that are doomed to end in any event. 128

A third reason why second party enforcement may fail and litigation may ensue is that the parties' gain from the relationship relative to their outside opportunities may change exogenously. On the theory sketched earlier, the credibility of termination as a punishment for nonperformance depends upon the presence of plausible outside alternatives for the threatening party. Should market opportunities for such a party worsen, termination may no longer be credible, leaving litigation as the only way to punish a perceived breach. On the other side of the equation, a sudden shift in the value of cheating to one of the parties may make termination ineffective even if credible. For instance, an unexpected business opportunity revealed by the very fact of the parties' relationship may be so valuable to one of the parties that it is worth sacrificing the relationship.

A fourth and final reason is somewhat more general. Especially in multidimensional relationships, the optimal punishment strategy may not be the simplistic alternative of terminating the relationship and sacrificing its benefits, but rather the gradual degradation of one's contribution to it. But when the payoff to the other party of were governed by implicit contractual terms that were not legally enforceable. Although Palay classified transactions as to the degree of asset of investment specificity, in order to test Williamsonian hypotheses on the relationship between asset specificity and governance structure, it is not clear what sort of variation in governance structure was either expected or observed in his interviews. What is a quite clear finding is that in the absence of legal enforceability, the parties in Palay's sample relied either on the availability of ready market substitutes—and the threat of relationship termination—or market reputation to ensure performance. The ready availability of a market exit option is, of course, precisely what Williamson's theory—of competition prior to, but commitment after contracting—denies. 128 Once a relationship has been terminated, "factors such as personal relationships and the desire for future business will have little effect," leaving litigation as the only effective alternative. Macaulay, supra note 7, at 65.
various actions is uncertain, such a strategy of gradual or limited "cheating" risks terminating the relationship anyway. That is, if the cost inflicted is too great, the other side may terminate in response. For this reason, litigation—a sanction imposed by the court, according to its standards—may be a lower risk strategy than second party gradualism.

There is a good deal of general empirical evidence supporting the plausibility of litigation even when second party enforcement is potentially effective. One of the most important findings in the historical literature on debt litigation is that litigation was very frequent even among people who were enmeshed in continuing relationships.129 A related finding—which supports the tradeoff between second party and third party sanctions—is that only when a merchant community is small, powerful, and ethnically or religiously homogeneous does one find that the community completely eschews litigation as a means of settling disputes among its members.130 As merchant communities become more diffuse and competitive with the entry of newcomers, the power of extralegal sanctions against contractual breach by its members weakens.131 Even more important, perhaps, is the wealth of evidence indicating the tremendous instability of extralegal enforcement mechanisms in situations where the parties' interactions

129 See MANN, supra note 69, at 2; see also Mulrow, supra note 84, at 25.

130 This pattern is very strong across both time and place. See, e.g., DAVID H. FISCHER, ALBION'S SEED: FOUR BRITISH FOLKWAYS IN AMERICA 586 (1989) (observing how 18th-century Delaware Valley Quakers were forbidden to "go to law" against one another, with resort to legal enforcement sometimes punished by expulsion from meeting); Greif, supra note 49, at 535-42 (recounting and explaining how the Maghribi tribe, a model that emphasizes the need for dense interaction and homogeneity within the group, controlled international trade during the middle ages without legal enforcement); Avner Greif, Reputation and Coalitions in Medieval Trade: Evidence on the Maghribi Traders, 49 J. ECON. HIST. 49 (1989); Janet T. Landa, A Theory of the Ethnically Homogeneous Middleman Group: An Institutional Alternative to Contract Law, 10 J. LEGAL STUD. 349, 355-57 (1981) (developing a theory of ethical codes embedded in kinship/ethnic relations as a functional equivalent of the law of contracts); Jack L. Carr & Janet T. Landa, The Economics of Symbols, Clan Names & Religion, 12 J. LEGAL STUD. 135, 138-144 (1983) (developing a theory of personalized exchange as a substitute for imperfect or nonexistent contract enforcement in which membership in thin space is easily identifiable and verifiable, and ethnic and religious groups provide assurance of group membership and effective future social sanctions); Bernstein, supra note 93, at 130-42 (explaining the pattern of nonlegal sanctions in the wholesale diamond trade).

131 For a theoretical demonstration that profit-maximizing merchant groups with effective internal sanctions against contractual breach will choose a suboptimally small group, see Robert Cooter & Janet T. Landa, Personal Versus Impersonal Trade: The Size of Trading Groups and Contract Law, 4 INT'L REV. L. & ECON. 15, 17-19 (1984).
extend beyond a single dimension of commercial dealings to encompass an entire social relationship. In such settings, punishment strategies are often observed to degenerate into uncontrolled cycles of retaliation, where the targets of retaliation involve relations that have little or nothing to do with the transactional basis of the original dispute.\(^{132}\)

There are, therefore, both theoretical and empirical reasons to think that second party sanctions will fail in at least three situations: 1) where the relationship is terminated or will soon terminate for unanticipated exogenous reasons; 2) where an exogenous change in the value of the relationship or outside opportunities has occurred; and 3) where the relationship is complex, social/business, and payoffs from punishment are likely to be unknown.

My sample of nine reported decisions involving litigation between parties with prior dealings seems to be very well explained by this three-factor theory. Two of the cases involve a party in bankruptcy.\(^{133}\) Five others involve the termination of the previously continuing relationship for other reasons—acquisition of one of the contracting parties by a third party,\(^{134}\) termination of a distributor after repeated failures by the distributor to pay past due accounts,\(^{135}\) termination of both the parties' business relationship and their romantic affair,\(^{136}\) replacement of one of the continuing players by a new entrant,\(^{137}\) and an extension of the parties'
dealings to a transaction of much greater magnitude than those that had formed the basis of their relationship. The final two cases, *American Dredging* and *Elia*, involved situations where, given termination of the relationship as a strategic response, litigation remained attractive, even if perhaps unanticipated at the outset. Thus, of the repeat player cases in my sample, seven involve either an endgame situation in which the relationship between the parties has terminated, or an unusual and unusually large transaction between the parties. The sample strongly confirms that resort to legal sanctions typically signals the end of the previously continuing relationship, a relationship not formed with the expectation that legal enforcement might be important.

On the other hand, while promising, my sample of repeat player *Statute of Frauds* cases displays only one case, *Christensen v. Ransom*, in which the parties' relations were seemingly so intertwined and necessarily continuing that litigation might be viewed as a way of keeping the peace between them and allowing the relationship to continue.

### III. TOWARD ROBUST INFERENCE FROM REPORTED DECISIONS: QUALIFYING THE TEST

The series of inferences drawn from my sample of published section 2-201 opinions invites challenge on the ground that published opinions are unrepresentative of the larger universe of underlying disputes as well as of the sub-universe of litigated disputes. The ability to draw inferences regarding the larger universe of disputes from such a sample depends upon the relationship between the sample and the larger universe. Ideally, one would have access to at least one survey which samples the universe of Article 2 formation disputes directly, thus capturing both those disputes that end in litigation and a possible opinion and those that are resolved extralegally. Unfortunately, no such survey exists. Alternatively, one might look to the existing evidence (noting that a cotton planter and cotton buyer had a 10- to 15-year relationship, but the planter's son entered the business and refused to honor an oral contract).

142 See id.
on the relationship between published (or unpublished) opinions and the underlying dispute universe for other sorts of disputes and then correct that relationship for systematic differences between dispute types. Unfortunately, even this sort of evidence does not yet exist. What does exist is a small amount of literature examining the relationship between cases that are filed and those that generate a published opinion. This literature suggests how inferences drawn from samples of published cases may need to be qualified to account for the unrepresentative character of cases that generate published opinions.

Using the Federal Courts filing database, Siegelman and Donohue have found that the proportion of employment discrimination cases filed in the Northern District of Illinois which generated opinions “published” in LEXIS rose from six percent to twenty-seven percent between 1974 and 1986. They also found substantial geographic variation in the frequency of publication—the probability of a published opinion in the Southern District of New York was over thirty-eight percent in 1986. As for the representativeness of published opinions, Siegelman and Donohue made several general points:

1. Cases ending in settlement are less likely to generate a published opinion, so that published opinions may tend to overrepresent disputes arising in uncertain areas of the law;

2. When only one party is a repeat player—as in products liability suits that do not involve repeat player plaintiffs’ attorneys—there may be a tendency for the repeat player to settle with a higher probability and yet contest litigated cases more vigorously, so that samples of published opinions overrepresent equal stakes lawsuits;

3. As a matter of judicial behavior, judges are more likely to write and submit opinions to LEXIS when they view the issues in the case as novel or important.

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143 See Siegelman & Donohue, supra note 21, at 1140.
144 See id. at 1144 (“The probability that a randomly selected case would come from the Southern District of New York is only 22.4 percent, while the probability that a randomly selected published opinion would come from the same district is 38.5 percent.”)
145 See id. at 1147-48.
146 See id. at 1148.
147 See id. at 1149.
Testing these hypotheses against a coded sample of all cases filed, Siegelman and Donohue found statistical support for the hypothesis that cases with published opinions tend to involve higher stakes, greater complexity and novelty, and tend to take much longer to process than do those without published opinions.\textsuperscript{148} Siegelman and Donohue did not attempt to test the second hypothesis on repeat player behavior. Data from the District of Minnesota, collected and analyzed by Susan Olson\textsuperscript{149} tend to cast some doubt on the repeat player hypothesis. Olson found that organizational presence—a likely proxy for repeat player status—was not related to likelihood of publication in a statistically significant way.\textsuperscript{150} Moreover, as a theoretical matter, the notion that repeat player litigants are both more likely to settle and more likely to contest cases that do not settle may conflate two rather distinct strategic alternatives.

Let us take it as tentatively established that in contract law as in employment discrimination, published opinions tend to overrepresent complex, uncertain or novel legal issues and litigants with large stakes in the disputes. What does this pattern imply about the robustness of my inferences regarding Statute of Frauds disputes? Perhaps my key finding is that in my sample of published opinions, disputes where the parties had a pattern of prior dealings are much more likely to involve no written contract than are those where the parties had no prior dealings. The inference drawn from this finding was that, as predicted, repeat player transactions are characterized by a lower level of formality and less concern with legal enforceability. This inference would be weakened or destroyed by the Priest-Klein selection bias if the more complex or high stakes disputes among players with a history of prior dealings tend to be those where there is no writing, for then the occurrence of such an issue in this sub-sample of published opinions would simply illustrate the tendency for published opinions to discuss complex issues. But if the more complex disputes involving the Statute of Frauds are those involving the absence of a writing then one ought also to observe an overrepresentation of cases involving this issue in the sample of (coded) stranger cases. That the coded litigant status so strongly predicts the presence or absence of a

\textsuperscript{148} See id. at 1165-66.


\textsuperscript{150} See id.
written contract and yet is itself unrelated to the complexity of the underlying legal issue, strongly suggests that selection bias does not account for the observed relationship between status and the writing.

IV. CONCLUSION: RATIONAL CASE SELECTION AND ARGUMENTS FOR ABOLISHING THE STATUTE OF FRAUDS

The previous Part explains the two observed patterns in reported decisions involving section 2-201. Cases that involve relatively anonymous one-shot transactions present situations in which the parties had a writing and the defendant questions the sufficiency of the writing. In cases involving repeat players, the parties often did not have a writing and the issue of whether a writing is required or whether instead one of the statutory exceptions applied becomes determinative. These positive findings have implications for the normative debate over abolition of the Statute of Frauds.

As noted above, the essence of the argument for abolishing the Statute of Frauds is that it does not have any effect in channeling behavior and that even if it did, frauds regarding the existence of a contract will occur regardless of whether there is a writing. The belief that the Statute of Frauds does not affect behavior is based entirely on (a) the lack of any empirical evidence that it does, and (b) the spectra of judges engaging in strained interpretations of the statutory requirements and exceptions in order to find that the Statute does not apply when confronted with clear nonwritten evidence of an agreement. Even if one were of the view that many of the reported decisions I surveyed involve strained interpretations in an effort to find that the Statute does not apply, that these arguments are raised does not indicate that the Statute has no influence on behavior. To the contrary, that they are raised—along with sufficiency arguments—by non-repeat players for whom an assurance of legal enforceability is important suggests that for this class of transactions, the formal requirements of the Statute may indeed shape ex ante behavior. Moreover, in my view, courts in the sample cases correctly identified the controlling norm between strangers that no agreement exists until a signed writing is executed.

In addition, my finding that disputes where judges actually do find a statutory exception to the writing requirement are those where continuing relations between the parties make legal enforceability secondary to nonlegal sanctions also fails to support the
desirability of the Statute's abolition. The logical reform suggested by these cases is to require a writing only if the norm in the relevant community is to have a writing. It may sometimes be possible for judges to ascertain with a high degree of accuracy whether community norms dictate that there is no contract until a formal closing involving execution of a written agreement. For instance, it is well understood that commercial lenders and borrowers are not bound prior to execution of a written commitment letter\textsuperscript{151} and that merger or acquisition agreements are not made by letters of intent or announcements of preliminary agreements but only at the time of formal closing.\textsuperscript{152} The problem with this approach is that each case must be categorized as to the community norm, and if judges sometimes make errors in categorization, then the norm discovery approach will create uncertainty regarding whether there is an agreement without a writing. Such uncertainty will have little ex ante effect on behavior within communities where legal enforcement is unimportant. It will have its greatest and most harmful ex ante effect precisely in those communities where legal enforcement matters and where ex ante contracting behavior is strongly shaped by the formal requirements of enforceability. The point here is that success in fashioning clear formal rules that guide communities whose members rely on legal enforcement will \textit{necessarily} generate a pattern in which the cases that end up in the reports are those involving relationships where legal enforcement is not important and where by definition the parties have failed to comply as they should have.

Even were they found in some sample, numerous cases involving strained interpretations of section 2-201 to ensure that its formal writing requirement does not apply would not constitute a satisfactory argument for abolition of the statutory formality. The real question is whether abolition of the Statute to conform to these cases will erode the norm of written contracts in communities dependent upon legal enforcement. Here, the evidence indicates that contracts are put in writing for two reasons—to secure legal enforceability and to clarify what is to be expected as performance

\textsuperscript{151} See Teachers Ins. & Annuity Ass'n of America v. Tribune Co., 670 F. Supp. 491 (S.D.N.Y. 1987) (holding that commitment letter represented a binding preliminary commitment and obligated both parties to conclude loan agreement upon agreed terms by negotiating in good faith).

\textsuperscript{152} See R.G. Group, Inc. v. Horn & Hardart Co., 751 F.2d 69 (2d Cir. 1984); Consarc Corp. v. Marine Midland Bank, N.A., 996 F.2d 568 (2d Cir. 1993).
proceeds. Regardless, however, of the magnitude of the perceived probability that legal enforcement will be necessary, the level of detail in the parties' written agreement should be greater the more complex the transaction. This assumption implies that it is only in relatively simple transactions where legal enforceability is an ex ante need that the level of written contractual detail will be strongly affected by the presence or absence of statutory requirements. Hence, abolition of the Statute would tend to undermine the use of a detailed writing in relatively simple transactions, leading to greater cost and uncertainty in the resolution of disputes arising out of such transactions. The ultimate issue would then be whether such a cost is justified by the benefit that is realized when the posited tortured applications of the Statute are avoided. My sample indicates that however tortured the reasoning may be, there is little uncertainty that judges will find a way around the Statute of Frauds when confronted by an informal but actual agreement between parties in a continuing relationship. On this view, the balance clearly tips in favor of retaining the Statute.
APPENDIX

This Appendix contains a table listing all thirty cases in the base sample and the coding used for the statistical analysis. It also contains some information on coding reliability measures.

A. The Coding

For purposes of both textual discussion and statistical analysis, the coding given in Table Three below was determinative.

<table>
<thead>
<tr>
<th>Case Name</th>
<th>Prior Dealings</th>
<th>Writings</th>
<th>Statute of Frauds Issue</th>
<th>Endgame</th>
<th>Complexity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akrosil</td>
<td>no</td>
<td>yes</td>
<td>sufficiency</td>
<td>NA</td>
<td>high</td>
</tr>
<tr>
<td>Wells, Water</td>
<td>yes</td>
<td>yes</td>
<td>ct raised; writing, sufficiency</td>
<td>yes</td>
<td>moderate</td>
</tr>
<tr>
<td>McCulley</td>
<td>no (brokered)</td>
<td>no</td>
<td>exception</td>
<td>NA</td>
<td>simple</td>
</tr>
<tr>
<td>Buffaloe</td>
<td>yes</td>
<td>no</td>
<td>exception</td>
<td>transaction type changed</td>
<td>simple</td>
</tr>
<tr>
<td>Atlantic Box</td>
<td>yes</td>
<td>no</td>
<td>exception</td>
<td>yes (merger, acquisition)</td>
<td>moderate</td>
</tr>
<tr>
<td>Gasmark</td>
<td>§ 2-201 not even cited</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nucor</td>
<td>no</td>
<td>yes</td>
<td>no exception; sufficiency</td>
<td>NA</td>
<td>moderate</td>
</tr>
<tr>
<td>Hurwitz</td>
<td>yes</td>
<td>no</td>
<td>statute inapplicable</td>
<td>yes</td>
<td>high</td>
</tr>
<tr>
<td>Axelson</td>
<td>not a live § 2-201 issue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jones</td>
<td>no</td>
<td>yes</td>
<td>no merchant exception</td>
<td>NA</td>
<td>moderate</td>
</tr>
<tr>
<td>Case Name</td>
<td>Prior Dealings</td>
<td>Writings</td>
<td>Statute of Frauds Issue</td>
<td>Endgame</td>
<td>Complexity</td>
</tr>
<tr>
<td>---------------</td>
<td>----------------</td>
<td>----------</td>
<td>-------------------------</td>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>Real</td>
<td>not a live § 2-201 issue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kirkpatrick</td>
<td>not a live § 2-201 issue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dixon</td>
<td>no</td>
<td>yes</td>
<td>sufficiency (marginal issue)</td>
<td>NA</td>
<td>moderate</td>
</tr>
<tr>
<td>Champion Turf</td>
<td>no</td>
<td>yes</td>
<td>sufficiency (merchant exception)</td>
<td>NA</td>
<td>moderate</td>
</tr>
<tr>
<td>Ryan</td>
<td>no</td>
<td>yes</td>
<td>sufficiency</td>
<td>NA</td>
<td>high</td>
</tr>
<tr>
<td>MSR Exploration</td>
<td>no</td>
<td>yes</td>
<td>marginal issue</td>
<td>yes, bkrtcy</td>
<td>high</td>
</tr>
<tr>
<td>Christensen</td>
<td>social network, dyadic?</td>
<td>yes (sketchy)</td>
<td>exception (marginal argument)</td>
<td>unclear</td>
<td>moderate</td>
</tr>
<tr>
<td>Magallanes</td>
<td>no (brokered)</td>
<td>yes (telex, then writing)</td>
<td>exception (marginal argument)</td>
<td>NA</td>
<td>moderate</td>
</tr>
<tr>
<td>Figueroa</td>
<td>no</td>
<td>yes</td>
<td>exception (marginal issue)</td>
<td>NA</td>
<td>high</td>
</tr>
<tr>
<td>In Re Uni-Products</td>
<td>yes</td>
<td>yes</td>
<td>exception</td>
<td>bkrtcy</td>
<td>moderate</td>
</tr>
<tr>
<td>Baker Hughes</td>
<td>no</td>
<td>yes</td>
<td>no exception; writings inadequate</td>
<td>yes (seller out of business)</td>
<td>moderate</td>
</tr>
<tr>
<td>In Re Atkins</td>
<td>no</td>
<td>yes</td>
<td>no exception; writing inadequate</td>
<td>yes</td>
<td>moderate (install-ment)</td>
</tr>
<tr>
<td>American Dredging</td>
<td>yes</td>
<td>yes</td>
<td>marginal</td>
<td>yes</td>
<td>high (war-ranty)</td>
</tr>
<tr>
<td>In Re Alper- Richman</td>
<td>yes</td>
<td>no</td>
<td>exception found</td>
<td>bkrtcy</td>
<td>high</td>
</tr>
<tr>
<td>Syrovy</td>
<td>not live § 2-201 issue</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
B. Coding Reliability Measures

As a test on the reliability of the author's coding, a large subset (18 of 23) of the cases were coded by at least three and (on some issues) four individual coders, working completely independently. The case coding sheet is available from the author upon request. The basic coding consistency results—simple correlations—are given in Table Four below.

From Carmines and Zeller,\(^{153}\) we have at least two candidate tests of measurement consistency across coders. One of these is the average correlation between coder responses for a single item. The other, Cronbach's Alpha, adjusts average correlation for the number, \(N\), of coders. If we let \(p\) denote the arithmetic average correlation, then Cronbach's Alpha, denoted by \(\alpha\), is given by:

\[
\alpha = \frac{Np}{1 + p(N-1)}.
\]

For the PRIORD variable, the average correlation is 0.642, and $\alpha = 0.87$. For the COMPLEXITY variable, the average correlation is 0.75, and $\alpha = 0.923$. For the WRITE variable, each index is a perfect 1.0. All of these tests are well within the conventional range of acceptability.

**TABLE 4**
Case Coding Consistency Data

<table>
<thead>
<tr>
<th>Case Name</th>
<th>PRIORD</th>
<th>WRITE</th>
<th>COMPLEXITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffaloe</td>
<td>4/4 yes</td>
<td>100% on all</td>
<td>4/4 simple</td>
</tr>
<tr>
<td>Atlantic Box</td>
<td>4/4 yes</td>
<td>1 mod.</td>
<td>(3 simple, 1 mod.)</td>
</tr>
<tr>
<td>Jones</td>
<td>4/4 no</td>
<td></td>
<td>(3 simple, 1 mod.)</td>
</tr>
<tr>
<td>Beal</td>
<td>3/4 said not § 2-201</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kirkpatrick</td>
<td>3/4 said not § 2-201</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dixon</td>
<td>2 no, 2 yes</td>
<td>(2 mod., 2 simple)</td>
<td></td>
</tr>
<tr>
<td>Champion Turf</td>
<td>3 no, 1 yes</td>
<td>(2 mod., 2 simple)</td>
<td></td>
</tr>
<tr>
<td>Ryan</td>
<td>2 no, 1 yes, 1 not § 2-201</td>
<td>3 high</td>
<td></td>
</tr>
<tr>
<td>MSR Exploration</td>
<td>2 not § 2-201, 2 no</td>
<td>2 high, 2 mod.</td>
<td></td>
</tr>
<tr>
<td>Christensen</td>
<td>2 unclear, 1 yes, 1 no</td>
<td>2 simple, 2 mod.</td>
<td></td>
</tr>
<tr>
<td>Magallanes</td>
<td>2 said not § 2-201, 2 no</td>
<td>2 mod.</td>
<td></td>
</tr>
<tr>
<td>Figueroa</td>
<td>1 not § 2-201, 3 no</td>
<td>3 high</td>
<td></td>
</tr>
<tr>
<td>In Re Uni-Products</td>
<td>3 yes, 1 no</td>
<td>4 mod.</td>
<td></td>
</tr>
<tr>
<td>Baker Hughes</td>
<td>2 yes, 2 no</td>
<td>3 mod., 1 simple</td>
<td></td>
</tr>
<tr>
<td>In Re Atkins</td>
<td>4/4 no</td>
<td></td>
<td>3 simple, 1 mod.</td>
</tr>
<tr>
<td>Case Name</td>
<td>PRIORD</td>
<td>WRITE</td>
<td>COMPLEXITY</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------------------</td>
<td>--------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>American Dredging</td>
<td>2 said not § 2-201, 1 yes, 1 no</td>
<td></td>
<td>1 high, 1 simple</td>
</tr>
<tr>
<td>In Re Alper Richman</td>
<td>2 said not § 2-201, 2 yes</td>
<td></td>
<td>3 high</td>
</tr>
<tr>
<td>Syrovy</td>
<td>3/4 said not § 2-201</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Valley</td>
<td>4/4 no</td>
<td></td>
<td>4/4 mod.</td>
</tr>
<tr>
<td>Dawkins</td>
<td>4/4 yes</td>
<td></td>
<td>4/4 simple</td>
</tr>
<tr>
<td>Brochsteins</td>
<td>3/4 not § 2-201</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Stanley</td>
<td>2 yes, 2 no</td>
<td></td>
<td>3 mod.</td>
</tr>
<tr>
<td>D.A. Elia</td>
<td>2 said not § 2-201; 1 yes, 1 no</td>
<td></td>
<td>2/2 mod.</td>
</tr>
</tbody>
</table>