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The Efficiency of Vague Contract Terms: A Response To The Schwartz-Scott Theory Of U.C.C. Article 2

George G. Triantis*

I. INTRODUCTION

In *The Rise and Fall of Article 2*,¹ Robert Scott presents several positive theses concerning the effect of the political economy of the drafting and revision of Article 2 of the Uniform Commercial Code on (a) the nature of the default provisions in the statute, (b) the judicial interpretation of express contract terms, and (c) private contracting behavior. A core thesis was developed with Alan Schwartz in an earlier article.² It suggests that the original drafting of Article 2 occurred in an environment in which no interest group dominated and the drafters were predominantly academics with policy goals that diverged from the more conservative views of the median member of the private legislature, the ALI-NCCUSL. The drafters were inclined to propose vague standards instead of clear rules in order to increase the likelihood of adoption of their draft statute. Standards obtain much of their content from their subsequent application by courts to specific facts. Schwartz and Scott argue that their prediction is borne out by the vague provisions in Article 2—indeed, quite clearly so.³ The adoption of these vague provisions resulted, therefore, not from their intrinsic merits, but from the political conditions the authors identify.⁴ In *The Rise and Fall*, Scott

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1. Robert E. Scott, *The Rise and Fall of Article 2*, 62 La. L. Rev. 1009 (2002) [hereinafter "Scott, *Rise and Fall*"].

2. Alan Schwartz & Robert E. Scott, *The Political Economy of Private Legislatures*, 143 U. Pa. L. Rev. 595 (1995) [hereinafter "Schwartz & Scott"].

3. "Because academics were and are in charge, we predict that both the original Article 2 and the revisions will contain many vague rules. The former prediction is confirmed on the face of the statute. Almost everyone who has studied the subject agrees that the original Article 2 has many [vague] rules." *Id.* at 646. Compare with Lawrence Friedman, *Law Reform in Historical Perspective*, 13 St. Louis L.J. 351, 355 (1969) ("Essentially, [the Uniform Commercial Code] was a scheme of law professors, hungry for clarity and order in a tool of their trade.").

4. Scott, *Rise and Fall*, *supra* note 1, at 1010-11, 1041-42; Schwartz & Scott,

reiterates this thesis and argues that private parties often prefer bright-line legal rules to the vague terms in the Code.⁵ These parties find it cheaper to simply contract out of the defaults in Article 2 than to lobby for clearer and more predictable default rules.⁶ Scott observes that the deficiencies of overly vague standards in Article 2 “may have contributed to the decision by many commercial parties to abandon Article 2 and its open-ended default rules in favor of more concrete, privately devised alternatives.”⁷

The Schwartz/Scott thesis concerning Article 2 asserts that political economy, rather than intrinsic policy merits, determined the vagueness of the provisions. As persuasive as their theory may be, it is unfortunately difficult to test.⁸ The theory of optimal vagueness, or the optimal choice between rules and standards, has not evolved to the point of producing a clear normative benchmark against which Article 2 provisions may be evaluated. Contract scholars and lawyers undoubtedly have different views as to whether Article 2 provisions are indeed more vague than optimal. To some, good faith and commercial reasonableness are means to implement the intentions of the parties to rely on ex post judicial determinations. To others, these terms invite judges to rewrite contracts and create costly uncertainty in commercial transactions.

An alternative test, suggested by Scott’s analysis, compares the degree of vagueness in Article 2 to the terms that sophisticated commercial parties include in their contracts.⁹ Yet, vague terms are

supra note 2, at 615-21.

5. In *Rise and Fall*, Scott reiterates the argument made in previous works that informal norms motivate contracting parties to cooperate in adjusting their performance to changed circumstances and that “[a]ny effort to judicialize these social and relational norms threatens to destroy the very informality and flexibility that makes them so effective in the first instance.” Scott, *Rise and Fall*, *supra* note 1, at 1041. In general, therefore, he proposes that commercial parties prefer to be governed under separate regimes of bright-line legal default rules and flexible relational norms that are not legally enforceable. See Scott, *Rise and Fall*, *supra* note 1; Robert E. Scott, *Conflict and Cooperation in Long-Term Contracts*, 75 Cal. L. Rev. 2005 (1987); Robert E. Scott, *A Relational Theory of Default Rules for Commercial Contracts*, 19 J. Legal Stud. 597 (1990).

6. Scott, *Rise and Fall*, *supra* note 1, at 1014.

7. *Id.* at 1056.

8. One test would compare Article 2 with sales law in other jurisdictions in which different legislative processes control. At first glance, it appears that vague sales law default rules seem to be as common, if not more so, in the statutes of other legal jurisdictions where private legislatures such as ALI-NCCUSL do not play a role. Perhaps the key factor is the joint presence of academic drafters—or even simply drafters with no economic interest in precision—and absence of dominant interest group; private legislatures may not be a significant factor.

9. A third test compares Article 2 to the common law default rules, as Scott has done in another work with respect to the interpretation of express terms. See

also ubiquitous in commercial contracts. Although these contracts tend to leave many terms to the discretion of one party (for example, requirements or output contracts), vague expressions such as “reasonableness,” “good faith” and “best efforts” are very common in commercial agreements. Indeed, in the foundational article on relational contracts, Scott and Charles Goetz observe that “best efforts” clauses are frequently used in a variety of contracts and the authors prescribe the efficient judicial interpretation of this term.¹⁰ Given that sophisticated and self-interested parties voluntarily agree to such vague terms in their agreements, the preference of Article 2 reformers for standards may simply reflect commercial practice in this regard.¹¹

The apparent willingness of commercial parties to agree to vague terms is puzzling. The conventional view is that business entities avoid the cost and risk of litigation. In this light, one would expect that parties strive to reduce the uncertainty and cost of judicial interpretation of their bargain—as well as the imposition of external judicial values—by agreeing to the precise, bright-line rules that Scott advocates. Several explanations of vague contract terms are consistent with this view in that they attribute the vagueness we see in practice to bounded rationality or agency problems in bargaining. For example, when parties bargain through agents, the agents may shirk and thereby leave obligations unspecified. Agents may also have higher discount rates than their principals, preferring to avoid the risk of a deal-breaking negotiation over a specific contingency and to accept instead the risk of a protracted and uncertain litigation.

This comment begins a search for efficiency justifications for vague terms in private contracts by examining the effect of anticipated litigation activity on the drafting of substantive contract

Robert E. Scott, *The Uniformity Norm in Commercial Law: A Comparative Analysis of Common Law and Code Methodologies*, in *The Jurisprudential Foundations of Corporate and Commercial Law* (Jody S. Kraus & Steven D. Walt, eds., 2000).

10. Charles J. Goetz & Robert E. Scott, *Principles of Relational Contracts*, 67 Va. L. Rev. 1089, 1111 (1981). The authors urge the courts to interpret “best efforts” in such a way as to induce efficient actions: that is, that maximize the joint wealth of the parties. Scott appears to have since lost faith in the judiciary’s ability to follow this prescription, at least partly because the relevant variables tend to be private information of the parties.

11. In some cases, efficient default terms might be even more vague than most commercial parties would choose: if contracting from vague to precise terms (by the majority) is substantially cheaper than contracting from precise to vague terms (by the minority). This point is made in the context of corporate law by Ian Ayres. Ian Ayres, *Making a Difference: The Contractual Contributions of Easterbrook and Fischel*, 59 U. Chi. L. Rev. 1391 (1992). He notes, for example, that the tendency of courts to read private attempts to modify default obligations narrowly is likely to be more pronounced when parties contract from precise to vague rules than when they reject the muddy default rules for unconditional provisions. *Id.* at 1406.

terms. Legal scholars have explored the impact of enforcement constraints on the design of regulation: including, the choice between rules and standards¹² and the value of accuracy in adjudication.¹³ The corresponding analysis is regrettably much more limited in contract theory, where the focus has been on a simple conception of verifiability: that contracting parties reject terms that are costly to enforce, but seek to address specifically as many future contingencies as may be feasibly distinguished by a future court.

Part II relates vagueness to verifiability by identifying three features of vague terms: (a) the failure to fully exploit all verifiable factors, (b) the inclusion of terms whose enforcement invokes non-verifiable factors and (c) uncertainty as to the judicial weight assigned to each among a set of bundled factors. Conventional wisdom suggests that contracting parties should wish to avoid each of these features. In contrast, Part III reviews some existing explanations for the fact that contracts are often less complete than verifiability would allow. Part IV advances a richer conception of verifiability based on a signaling theory of litigation,¹⁴ that suggests reasons why parties would contract over terms that appear nonverifiable. Part V offers a justification for the uncertainty in vague terms: it deters overinvestment in evidence production or destruction.

II. THREE FEATURES OF VAGUENESS

In the economic analysis of contracts, the benchmark for contract design (the first-best) is the complete contingent contract that specifies the obligations of the parties in each possible future state of the world. This contract ensures that each party makes the optimal decision in each state. If a contract partitions future states less finely by specifying the same obligations in more than one state, the contract may fall short of providing optimal incentives in each state, and it is called an incomplete contract.

Contract theory predicts that parties will avoid conditioning legal obligations on actions or states that are not verifiable to a court and a contract may be incomplete for this reason.¹⁵ Yet, the theory also

12. E.g., Louis Kaplow, *Rules Versus Standards: An Economic Analysis*, 1992 Duke L.J. 557.

13. E.g., Louis Kaplow, *The Value of Accuracy in Adjudication: An Economic Analysis*, 23 J. Legal Stud. 307 (1994).

14. For another example of a signaling model of litigation, see Daniel L. Rubinfeld & David E.M. Sappington, *Efficient Awards and Standards of Proof in Judicial Proceedings*, 18 Rand. J. Econ. 308 (1987).

15. A contract which is as complete as possible given these verification constraints—that is, a contract that exploits all verifiable distinctions between states—has been labeled functionally complete, or f-complete. Karen Eggleston, et

expects contracting parties to complete their contract to the extent allowed by this verification constraint.

The conception of verifiability in this literature is, however, underdeveloped. Oliver Hart describes “verifiability” as follows:

The contract, ‘I will pay you £1 million if you make the investment i’ is not enforceable, since no outsider knows whether it has been fulfilled. Similarly, the parties’ revenues and costs cannot be made part of a profit-or cost-sharing agreement. The quality of [my] book is observable, in the sense that anybody can read it. . . . However, it would have been difficult for Oxford University Press and me to have written a contract making my royalties a function of quality, since if a dispute arose it would be hard for either of us to prove that the book did or did not meet some pre-specified standard. (For this reason my royalties are made to depend on some (more or less) verifiable consequences of quality, e.g. sales.) In other words, quality is not verifiable.”¹⁶

For convenience, Hart and other economists treat verifiability as exogenous, binary and static: their models assume each category of relevant fact to be either verifiable or not. However, the link between verifiability and the difficulty or cost of proving a fact is at best incomplete. After all, even a high enforcement cost might be justified by a larger benefit in resulting efficiency of ex ante performance incentives. Moreover, there are several reasons why verification costs may not be incurred: the parties may settle their disputes or one party may choose to capitulate rather than litigate. Finally, it is more accurate to think about adjudication as an exercise in persuasion rather than verification in the sense of proving truth. A fact need only be proven on balance of probabilities and courts are in fact often misled by false evidence.

Before elaborating these factors in Parts III and IV to produce a richer conception of verifiability, I connect the economic concept of verifiability to the vague contract terms with which this comment is concerned. Vagueness may be defined by three distinct features. First, a vague term partitions the future into fewer states of the world than the relevant verifiable information would allow, and thus yields a less complete contract. Second, a vague term permits parties to a

al, *The Design and Interpretation of Contracts: Why Complexity Matters*, 95 *Nw. U. L. Rev.* 91, 101 (2000) [hereinafter “Eggleston, et al.”]. Alan Schwartz calls this contract endogenously incomplete because it stems from a conscious choice by the parties to omit the nonverifiable factors. Alan Schwartz, *Incomplete Contracts*, in 2 *The New Palgrave Dictionary of Economics and the Law* 278 (Peter Newman ed., 1998).

16. Oliver Hart, *Firms, Contracts and Financial Structure* 37-38 n.15 (1995).

subsequent dispute to spend resources attempting to persuade a court of nonverifiable facts. Third, a vague term creates uncertainty with respect to the factors, both verifiable or nonverifiable, a court may find relevant in adjudicating a dispute, and the weight the court will assign to each.

These three features are demonstrated by the following example and illustration. A seller promises to deliver a good that has variable quality. The contract might condition the price payable by the buyer on some or all of the three attributes of the good: A, B and C. A and B are verifiable attributes, while C is not verifiable. Consider four possible contracts. (1) The contract sets four prices based on the presence or absence of each of the verifiable attributes, A and B. The buyer's obligation does not depend on the presence of C. This contract is as complete as the verification constraints allow. (2) The contract bases the price on only one of the verifiable attributes, A, and the parties decide not to use the information from attribute B. This contract is more incomplete than the first contract because it throws away the information provided by the presence or absence of B. (3) The contract conditions the price on the presence of C, even though C cannot be proven to a court in a cost-effective manner. By this action, the parties decide not to exclude evidence of C in any subsequent court dispute. (4) The parties provide that each of A, B and C are factors in the determination of the price, but they leave the relative weight of each factor (ranging from zero to dispositive) to the discretion of the enforcing third party. This fourth contract is a vague term. It shares the properties of the second contract in that it does not condition the buyer's obligation separately on each verifiable quality, and of the third contract in that it does not exclude the introduction of evidence concerning a relevant, but nonverifiable factor. The vague contract also adds uncertainty as to the relevance or significance of any given factor.

To use Oliver Hart's book as an illustration, the publishing contract might condition the author's payment on any of three factors: its sales over the first two years, the number of reviews of the book in academic journals, and its contribution to knowledge. A vague term, such as "high quality," does not distinguish between a bestseller and a book that attracts the attention of academic journals, and is therefore incomplete even as between verifiable states. It also admits nonverifiable factors because it does not preclude attempts by another party in a subsequent dispute to introduce evidence as to the contribution of the book to the science of economics. Finally, there is uncertainty as to which among the three factors a court will give the most, or even exclusive, weight. The remainder of this comment offers reasons why each of these three features may be efficient, thus justifying the occasional use of vague terms.

III. WHY CONTRACTS MAY NOT EXPLOIT ALL VERIFIABLE FACTORS

A number of explanations have been offered for the decision of parties not to exploit some verifiable factors. First, the ex ante transaction costs of specifying each possible verifiable future state of the world—even if they can all be foreseen and contemplated—may exceed the gains.¹⁷ The parties may have more cost-effective means at their disposal to address remote contingencies than legal enforcement of complete contract terms. They may rely on renegotiation or on unilateral discretion or adjustments, that in turn might be motivated by the norms of their relationship, of their industry, or of their social environment. When a party proposes that these norms of cooperation or trust be supplanted by express legal terms, she may identify herself as someone who does not feel bound by them. There is a distinct, but familiar, additional constraint stemming from the utility individual parties derive from participating in fair bargains that leads them to adjust the course of performance to maintain a fair balance in changed circumstances.¹⁸ Yet, when the gains from not cooperating exceed the sanctions within or outside the relationship, these preferences or norms may not be sufficient to discipline the behavior of the parties. As Eggleston, Posner, and Zeckhauser explain: “The contract need deal only with states in which the payoffs are very high, for it is in these states that the threat of retaliation [or other extra legal sanctions] may not deter a party from engaging in opportunism.”¹⁹

Other explanations suggest that, when information is asymmetric between the parties, the better-informed party may refrain from proposing a more complete contract because, in doing so, she may communicate private information to the other party and thereby compromise her share of the contracting surplus. For example, the buyer may have private information about her high valuation of a good in a given state which might be revealed when she asks for a substantial warranty in that state. Also, a seller’s urging for a cost-plus contract may reflect her better-than-average ability to manipulate accounting records.²⁰

17. See, e.g., Oliver Hart & John Moore, *Incomplete Contracts and Renegotiation*, 56 *Econometrica* 755 (1988).

18. In a recent paper, Ernst Fehr, Alexander Klein, and Klaus M. Schmidt show that where a sufficient portion of the population is fair-minded, a contract that relies on the discretion of one or both parties (e.g. the principal decides whether to give the agent a bonus ex post) yields better incentives than a more complete contract because a detailed contract restricts the ability of one party to retaliate against non-cooperative behavior of the other. Ernst Fehr, Alexander Klein, & Klaus Schmidt, *Fairness, Incentives and Contractual Incompleteness* (Mar. 2001) (CESifo Working Paper No. 445).

19. Eggleston, et al, *supra* note 15, at 116.

20. Franklin Allen & Douglas Gale, *Measurement Distortion and Missing Contingencies in Optimal Contracts*, 2 *Economic Theory* 1 (1992). See also

Another constraint on contracting specifically over verifiable factors is known as the agency problem of multitasking. If there are a number of dimensions to an agent's product, some verifiable and others not, then conditioning reward on the measurable dimension distorts the agent's efforts toward the dimension on which compensation is based, and away from nonverifiable features. The important premise in this argument is that the agent might have pursued otherwise the nonmeasurable dimension because of an external benefit, such as personal satisfaction or reputation.²¹ Multitasking has a related selection effect—by drawing attention to the verifiable component, the contract attracts parties less concerned with the non-verifiable qualities.²²

Even if there are a host of good reasons for contracts that do not exploit all verifiable information, few, if any, justifications have been advanced for the second and third features of vague rules: namely, the open door to nonverifiable factors and the uncertainty as to the weight of each factor. Indeed, the conventional wisdom is that parties should not condition obligations on non-verifiable factors²³ and that they should avoid the risk associated with the judicial interpretation of their express terms. Yet, the common use of vague terms contradicts this prescription and raises the puzzle of why parties employ them. To be sure, there are some relatively simple but incomplete explanations. The parties may use a vague term to communicate

Kathryn E. Spier, *Incomplete Contracts and Signaling*, 23 *Rand. J. Econ.* 432 (1992).

21. Bengt Holmstrom & Paul Milgrom, *Multitask Principal-Agent Analyses: Incentive Contracts, Asset Ownership, and Job Design*, 7 *J. L. Econ. & Org.* 24 (1991); George Baker, *Incentive Contracts and Performance Measurement*, 100 *J. Pol. Econ.* 598 (1992); B. Douglas Bernheim & Michael D. Whinston, *Incomplete Contracts and Strategic Ambiguity*, 88 *Am. Econ. Rev.* 902 (1998).

22. As noted at the end of Part I, contracting parties might be able to convert a nonverifiable feature into a verifiable one by referring to the judgment of a third party arbiter within the industry. For example,

[i]t is difficult to imagine an occupation for which there are more measures of performance [than baseball]. Despite this, it is not common for players to have contracts where pay is directly related to *specific* performance measures. Part of the reason for this is that teams are reluctant to offer a contract that rewards a player for home runs, say, because the player may have an incentive to hit home runs even when it is not in the interest of the team for him to do so. By contrast, the more common cases where players are offered explicit bonuses are for *aggregate* measures of performance, such as making the All Star Team or being the league's Most Valuable Player. Since these are more holistic measures of performance, they suffer less from the multi-tasking dilemma.

Canice Prendergast, *The Provision of Incentives in Firms*, 37 *J. Econ. Lit.* 7, 22 (Mar. 1999) (italics in the original).

23. Alan Schwartz, *Relational Contracts in the Courts: An Analysis of Incomplete Agreements and Judicial Strategies*, 21 *J. Legal Stud.* 271 (1992).

intentions and expectations to each other, or even to their own co-workers or agents, rather than to a future arbiter or court. For example, a manager of the selling firm may be anxious to avoid the relational or reputational loss from supplying substandard goods to the buyer. It may be easier to communicate to subordinates the importance of performance by pointing to a contract term, albeit vague, than by referring to potential relational or reputational harm. However, by using their contract to do so, the parties cannot bind themselves against raising these terms in future litigation. Therefore, this puzzle calls for an analysis that endogenizes verifiability. The next two Parts offer a richer conception of verifiability by introducing a strategic theory of evidence management to the problem of contract design.

IV. A SIGNALING THEORY OF VERIFIABILITY

Verifiability should contemplate several factors beyond the cost of proving to a court a relevant fact. At a minimum, the cost of verifying a fact should be compared to the incentive gain yielded by the contractual provision that relies on this fact. For example, a fact is verifiable if the cost of proving it to a court is less than the gain in the *ex ante* performance incentives. Thus, even a high evidentiary cost may be outweighed by a larger incentive gain from more complete contracting. Conversely, a relatively easily proven factor may be nonverifiable if contracting separately on that factor effects an insignificant improvement in incentives.

Verification costs are at least partly within the control of the parties by virtue of their choice among contract terms and their actions during the term of the contract and any future dispute. For example, factors that are nonverifiable before a judicial court may be verifiable to a specialized arbiter. Vague terms such as "reasonable" may have a more precise meaning to an arbiter than a judge, and can therefore police a larger range of conduct. In addition, the parties may tailor the procedural rules in future arbitrations to further reduce verification costs. Arbitration, however, has its disadvantages and there are limits to the parties' ability to precommit to dispute resolution procedures.

Verification costs depend also on the parties' decisions during the adjudicatory process. If the parties settle their dispute, these costs will be only partly incurred, if at all. I set aside this prospect to focus on the possibility that, even without settlement, one or the other party may not find it worth its while to sue or defend. The cost of verifying a relevant fact therefore depends on the path of the litigation game the parties will play. In game theoretic jargon, we should initially focus our attention on enforcement costs incurred along the equilibrium

path. At various junctures, each party decides whether to offer no evidence, true evidence or false evidence. The system of adjudication appears to be quite tolerant of false evidence: perjury charges are rarely brought and the structure of burdens of proof often create very large incentives to meet the threshold by lying about some facts.

Suppose that a contract provides for the sale of a widget at a price of \$10. The value of the widget to the buyer is \$13. The cost to the seller is unknown when the contract is signed, but in two states of the world,²⁴ the costs are \$12 or \$14, respectively. Delivery is efficient when the cost is \$12 because the value to the buyer is \$13. However, delivery is not efficient when the cost is \$14. Therefore, the parties may contract that the seller is excused from its obligation to deliver when its cost is \$14. In a world of perfect enforcement, this would yield efficient incentives to perform and breach. Although the contract obliges the seller to deliver when the cost is \$12, the trade is a losing proposition for the seller in this state and she would therefore like to avoid her obligation to deliver by arguing that her costs are \$14. I assume that she can persuade the court through fabricated evidence at some cost. The following signaling analysis demonstrates that the decision of the parties to distinguish contractually between the two states (\$12 cost versus \$14 cost) depends not simply on the verification cost, but on the relationship between this cost and the threatened gains or losses from performance.

If the seller in the example succeeds in persuading the court to excuse her performance, she avoids a \$2 loss if her costs are \$12 and a \$4 loss if her costs are \$14. It follows that, if her cost of persuasion is more than \$4, she will not make this investment and will instead perform (or pay damages) even when her costs are actually \$14. The state is not verifiable in this case because the seller will not find it in her interest to incur the cost of proving it.²⁵ Suppose instead that the seller can convince the court that her costs are \$14 by spending an amount less than \$2 on evidence, even when her costs are in fact \$12. Then, the seller will be excused whether her costs are \$12 or \$14. In this case, the parties would not find it in their interest to distinguish between the two states in their contract because the seller would be excused in either state. Therefore, the contract should distinguish between the states only if the cost of *truthfully* establishing the excuse state is less than \$4 and the cost of *falsely* establishing it is more than \$2. Indeed, it is interesting that there need not be a difference in the

24. Note that there are other states. For the contract to be profitable to the seller, the average cost among all states must be lower than \$10. However, the example concerns only the distinction between two of the unprofitable states.

25. This analysis assumes an American fee-rule in which losing litigants do not reimburse the winners for any part of their litigation costs.

cost of establishing the excuse state truthfully or falsely. If the cost is \$3 in each state, only the seller with cost of \$14 will raise the defense; the \$12 seller will not find it worth her while.

A similar analysis may be applied to the buyer's incentives to present evidence of the realized state of the world. The important parameter in this analysis is the buyer's gain from performance (as opposed to the seller's loss). The buyer will persuade the court of the existence of the \$12-cost state only if the cost of doing so is less than \$3. Therefore, accurate costing will occur only if truthful evidence costs less than \$3 and false evidence costs more than \$3.

The analysis may also be adjusted to accommodate a more complicated adjudicatory process. For example, the litigation game may involve alternating actions by each party corresponding to shifting burdens of persuasion. Consider the following stylized form of litigation. After the buyer brings an action for breach of contract, the seller may present sufficient evidence to make a *prima facie* case for excuse, and thereby shift the burden on the buyer to show that excuse is not available. The buyer may then invest to rebut the *prima facie* case and throw the burden of proof back on the seller. The seller then decides whether to spend the amount necessary to prove the fact to the court on the balance of probabilities.

Suppose that the seller can spend \$1 to make the *prima facie* case that her costs are \$14, whether or not this is true. The seller may make this expenditure to avoid the greater loss from performance in either state. However, the buyer may increase the seller's verification cost by introducing contradictory evidence and shifting the burden of proof back to the seller. Suppose that by spending \$2 on evidence, the buyer can force the seller to incur an additional \$5 to meet her burden of proof. Anticipating the buyer's action before making the *prima facie* case, the seller will not find it worth her total investment of \$6- to prove performance costs of \$14 and will simply perform rather than trigger litigation. Thus, the state of the world in which delivery cost is \$14 is not verifiable because it is not in the seller's interest to prove it. The seller will therefore not value this excuse from performance, and the parties will not distinguish between the states in their contract.

Now, suppose instead that it costs the buyer \$4 to shift the burden of proof back to the seller. The buyer's threat in this case is not credible because the buyer would not spend \$4 to enforce a contract that yields a profit to her of only \$3. Therefore, the seller can win on her *prima facie* case. The seller therefore values the contracting term excusing her performance when her delivery cost is \$14 and the parties are likely to distinguish between the states. Note, however, that the aggregate expense of litigation, if it were to occur, would be higher in this example than the former one. The lesson to be drawn

from these examples is that the parties' incentives to complete their contract is determined by their verification expense if it lies on the equilibrium path. Therefore, if the buyer's cost of shifting the burden onto the seller is more than the value of performance (\$3), the state is contractible even though it is not verifiable. If it is less than \$3, the bad state is neither verifiable nor contractible because the high cost of verification lies on the equilibrium path. The seller may strive to avoid its obligations under either state because the cost of performance outweighs the price.

As a general proposition, a party's evidentiary burden is easier to meet when the truth is on his side. Therefore, the buyer's cost of rebutting the seller's prima facie case is likely to be lower if the seller is misrepresenting her cost as \$14 than if the cost is truly \$14. Suppose that the cost to the buyer of rebutting the prima facie case is \$2 when it is false and \$4 when it is true. The foregoing illustration suggests that the seller will attempt to prove its cost as \$14 only when it is true. Therefore, the parties will contract ex ante on the state of the world even though it would be costly to verify. An analogous argument applies to cases in which the seller's cost of proving its case, although high, differs substantially depending on whether its assertion is true or not. Therefore, as a general matter, commercial parties might contract on factors that are not verifiable if there is a sufficiently significant difference in the cost of proving or rebutting a truthful versus a false representation of the state of the world.

V. EVIDENCE MANAGEMENT AND AN INCENTIVE BENEFIT FROM UNCERTAINTY

A promisor has the choice to perform her contractual obligation or to not perform and suffer the sanctions for breach. Once the process of adjudication is added to the analysis, the promisor has a third option: to not perform and to invest in persuading the court that she has not breached (for example, because performance is excused under the contract). For ease of reference, I will refer to this investment as evidence management. An increase in the sanctions for breach might increase the incentive to perform, but it might also increase the incentive to breach and invest in evidence management.

Consider the following standard economic contract model. The parties contract at t_0 for the sale of a good at a specified price; delivery and payment are due at t_2 and these obligations are specifically enforced. At t_1 , one or both parties may make an investment that is specific to the contract and increases the value of the trade at t_2 (if trade occurs). There is uncertainty and, at both t_0 and t_1 , each party only knows the distribution of the cost to the seller of delivering the good and the value of the good to the buyer

evidence production at t_2 discounted by both the likelihood of no trade and the importance of the relevant factor in future litigation. At t_2 , the seller's delivery costs are determined, and the seller decides whether to trade or to claim an excuse. As noted in Part IV, the production of evidence at that time contributes to efficient screening by the court between states in which trade is efficient and in which it is not. At t_1 , however, there is uncertainty as to whether trade will or will not be efficient. As before, assume that the parties litigate if the seller chooses not to deliver. The seller has the incentive to overinvest in evidence at t_1 compared to the social optimum. For example, if the seller's cost appears to be substantially greater than the contract price at t_1 (the seller's stake is substantially out of the money), the seller may be motivated to invest in evidence rather than in reducing the cost of delivery. This is inefficient if the expected cost of delivery is less than the expected value to the buyer (even though the cost exceeds the contract price). The seller does not internalize the benefit from specific investment because any reduction in the cost of delivery enures to the benefit of the buyer. In contrast, evidence investment lowers the expected cost to the seller of avoiding the contract and the seller captures this benefit. The buyer, however, anticipates the seller's bias in favor of evidence investment by increasing her own investment in evidence at t_1 . This reinforces the seller's overinvestment in evidence and might contribute to an escalation of inefficient investment at t_1 . If so, the parties' joint interest at the time of contracting is to correct these incentives for evidence overinvestment.

The parties are unlikely to be able to contract as to the amount of evidence production because it is not verifiable. Uncertainty in the factors that excuse trade, however, can dampen the incentives for overinvestment in evidence. Compare contracts with certain and uncertain excuse terms. The precise contract excuses trade if any of a number of specified states of the world materialize. At t_1 , the seller will determine which states will be the least costly to prove at t_2 given the information at t_1 , and will invest in the production of evidence supporting the existence of those states. In contrast, the uncertain contract excuses trade on the basis of a term that encompasses several states of the world, but that leaves it to the discretion of the future court to determine which factor or state is dispositive. At t_1 , the seller must discount the benefit from evidence investment with respect to any given state by the probability that the court will choose that given state at t_2 . As a result, the expected benefit from evidence investment with respect to a given state is lower in the uncertain contract than in the precise contract. Thus, uncertain terms may be efficient because they correct for overinvestment in evidence by reducing the expected private benefit.

VI. CONCLUSION

Vague terms are characterized by three features: (a) they decline to exploit verifiable distinctions; (b) they decline to exclude recourse to nonverifiable factors in future litigation; and (c) they leave to judicial discretion the weight to be assigned to various verifiable and nonverifiable factors. This comment explains that there are efficient reasons why commercial parties may invoke each of these three features and, consequently, why they may rationally agree to vague terms in their contracts. Whether the default rules in Article 2 of the U.C.C. are more vague than what most parties would agree to is an open question deserving closer examination. In the absence of further inquiry into private preferences for vagueness, one cannot explain the Article's vague terms as the result of the peculiar political economic environment of its drafting and enactment.

