INTERIM CONTRACT INTERPRETATION

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This Article makes two basic contributions to the literature on contract renegotiation and interpretation. First, we introduce a cause of renegotiation failure that has remained unexplored in the interpretation literature: uncertainty regarding "court types" rather than party types. This uncertainty can include (i) the evidence a court will admit (and the weight the court will give to the evidence), (ii) the inferences a court will draw from the evidence, and (iii) how a court will apply contract law to the evidence. Parties may be uncertain regarding the court's type because how a court will behave regarding these three issues is partly the court's private information. When parties disagree regarding the court's interpretative beliefs, they will assess their expected litigation payoffs differently. Therefore, parties may litigate a dispute although they are symmetrically informed about payoff relevant variables and renegotiation gains exist.

Second, we suggest a novel interpretive procedure that responds to this problem. Parties should be able to obtain an "interim contract interpretation": that is, a judicial interpretation of their contract at the renegotiation stage rather than after a breach occurs. A midstream interpretation, in the form of a declaratory judgment or a new reformation remedy, would permit parties to align their beliefs on expected litigation payoffs and therefore to continue an arrangement they would otherwise inefficiently terminate, or efficiently terminate a relationship without bearing unnecessary performance or litigation costs.

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INTRODUCTION

The written terms of a contract are common knowledge, but parties sometimes litigate rather than renegotiate. Litigation most commonly occurs when parties have different views about how a court will apply their contract to the realized ex post state.[1] We focus on this source of conflict and have a novel take. On the standard view, parties signal their "type"—their actual intent—to the court. Signals include the written contract, the performance (what parties did evidences what they intended to do), and the context (negotiations, memoranda, practice). The court's task is to aggregate the signals the parties send to determine their type.[2] Interpretive rules guide courts in performing this task.[3]

Courts observe the contract and the performance. Interpretive rules differ in how much context evidence they permit a court to admit. "Contextual" interpretive rules permit the court to use a broad evidentiary base[4] on the theory that widening the signal space improves the court's ability to find the parties' type. "Textual (or formalist)" rules accept this theory but elide its implication by arguing that *parties* should chose the width of the evidentiary base.[5] The formalist view follows from two premises: (i) the accuracy of an interpretation is increasing in the cost to make it; (ii) a party is better informed than a court about the party's type and therefore about the optimal tradeoff for that party between accuracy and contract writing and litigation costs. Thus, an efficient interpretive rule should delegate to parties the question how much context the court should see. Parties answer this question by the amount of context they include in the writing and will introduce at trial.[6]

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[1] Interpretive disputes are the largest source of contract litigation between business firms, Schwartz & Scott, 2010, at 928 (and fn. 3).
[2] Scott, 2000, at 853; Schwartz and Watson (2015).
[3] The interpretive rules matter for contract design as well as enforcement because the rules affect the costs of writing contracts, provide parties with incentives to invest in the deal and can reduce (or increase) expected litigation costs. Schwartz & Scott, 2010, at 963; Schwartz and Watson (2015); Schwartz & Sepe, 2021, at 700.
[4] This broader evidentiary base includes the parties' past practices and current practices under the contract as well as trade usages and customs in addition to the contract itself.
[5] By limited evidentiary basis, textualists (or formalists) refer to the contract itself, and the pleadings and briefs describing the parties' performance under the contract. See Schwartz & Scott, 2010, at 931, fn. 13.
[6] Schwartz & Scott, 2010, at 963.

In this Article, we make two contributions to interpretive theory. First, we explore a "type issue" that has remained unexplored in the interpretation literature: uncertainty regarding "court types" rather than party types. Such uncertainty can include (i) the evidence a court will admit (and the weight the court will give to the evidence), (ii) the inferences a court will draw from the evidence, and (iii) how a court will apply contract law to the evidence.[7] Parties may be uncertain as to the court's type because how a court will behave regarding these three issues is partly the court's private information. When parties have inconsistent second-order beliefs[8]—that is, they disagree[9]—regarding the court's interpretative beliefs, parties will assess their expected litigation payoffs differently. As a consequence, rational contracting parties may litigate a contract although they are informed about their types and there are renegotiation gains. Put directly, courts and commentators have been concerned with the problem of how a court should identify the parties' type; we are concerned with the problem of how the parties should identify the court's type.

Our second contribution is to suggest an interpretative rule that responds to this problem. Parties should be able to request "interim contract interpretation." Under this rule, parties would ask the court how it will interpret their contract.[10] A midstream answer would permit parties to align their beliefs on expected litigation payoffs and therefore to continue an arrangement they would otherwise inefficiently terminate, or efficiently terminate a relationship without bearing unnecessary performance or litigation costs. An action for interim contract interpretation could take the form of a declaratory judgment or a new reformation remedy.[11] Unlike ordinary interpretation, however, where the court's role is to enforce the parties' contract *after breach*, interim interpretation helps prevent breach by enabling the court to serve a coordination function.

Interpretative theories not only affect how a court finds the parties' type; they also affect how parties find the court's type. Formalist theories reduce uncertainty about the court's type because they restrict the evidence a court can use to make an interpretation. Contextualist theories increase uncertainty because they

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[7] *Stare decisis* facilitates predictability but only in part because (i) contract cases may have idiosyncratic features; (ii) some doctrines are equitable in nature (e.g., rescission) and the stare decisis doctrine is inapplicable to equity decisions; and (iii) some common law standards (e.g., good faith, reasonableness) are fact dependent. Courts might interpret the facts differently, even under evidence that is common knowledge.

[8] Under the theory of belief formation, parties may disagree when they begin a relationship with different prior beliefs regarding the state of the world (here, the court's type). See MICHAEL MASCHLER, EILON SOLAN & SHMUEL ZAMIR, GAME THEORY 365 (2013).

[9] In line with Harsanyi's information approach, the simplest way to model this disagreement is analyzing the information problem as a type problem. [add quote]

[10] There is legal precedent for interim contract interpretation. See 10 DEL. CODE ANN §§ 6502-03 (permitting a declaratory judgment action to "determine any question of construction or validity arising under … a contract … either before or after there has been a breach thereof.") *See also* Samuel L. Bray, *Preventive Adjudication*, 77 U. CHI. L. REV. 1275, 1286 (2010) ("before performance or breach it would be useful to have an opinion clarifying validity".) Bray is concerned with a contract's legal validity while we are concerned with its meaning but his point is the same as ours: it would be helpful to parties to know their status before making a breach or performance decision. [Also add practice of arbitration]

[11] *See infra* Part III.A.

expand the evidence the court can use. Hence, parties are more likely to hold divergent beliefs on expected litigation payoffs under a contextualist regime.

To illustrate this point, consider a common contracting problem. The contract requires a manufacturer (he) to produce a software program for a buyer (she) to use with her operating system. The parties discussed several possible software versions the manufacturer was exploring, some of which would be an improvement over the current operating system, but which would be more costly. The contract, however, only requires the manufacturer to produce a particular program for a specified price. The manufacturer, however, develops a software program that is compatible with the buyer's existing operating system and would increase the buyer's value but is more costly. Can the manufacturer perform the contract by tendering the new software but requesting a higher price, one that the parties discussed in pre-contractual negotiations? Can the buyer perform by accepting the new software but at the contract price? Can the buyer reject every program except the new software program?

Under a textualist regime, the manufacturer and the buyer are more likely to hold common beliefs on the court's type. Specifically, they will expect that the court will base its interpretation primarily on the written agreement. (i) Because the contract only requires the manufactured software to be compatible with *an* operating system, the parties will likely share a common belief that the buyer is only required to pay the contract price for any compatible software. (ii)The parties will coordinate their actions on this shared belief, renegotiating to trade the new software at a price that shares the increased surplus the software creates.

Conversely, under a contextualist regime, the parties will introduce evidence of their precontractual negotiations. Because those negotiations admitted the *possibility* that the parties agreed to trade new software at a higher price than the ultimate contract price, and because the parties' interests conflict, the parties might plausibly hold divergent beliefs on how the court will interpret their contract. The seller may believe that the court would permit him to deliver the new software at a high but previously discussed price while the buyer may believe that she need only accept the older system at the contract price. Therefore, the parties may litigate the contract although they know that renegotiation gains exist.

Our analysis thus predicts that parties are less likely to litigate when a court's interpretative discretion is subject to a textual constraint—to this extent, supporting the normative desirability of textualism over contextualism. But while we both defend a default textualist rule and one of us has done so before,[12] we emphasize that such a rule alone cannot fully solve the problem of court types. There are several reasons. First, and substantively, parties may lack the ability to alter the interpretative rules. As noted by one of us elsewhere, "the rules of the restatement, the UCC and many jurisdictions are mandatory and require courts to use broad evidentiary bases when interpreting merchant-to-merchant contracts."[13] Second, because the space of court's discretion is never empty, parties may end up having divergent beliefs on court interpretation even under a textualist interpretive

[12] Scott & Scwartz, 2003; Scott & Schwartz, 2010.
[13] Schwartz & Scott 2021, at 964.

rule.[14] Otherwise, we would never observe litigation for interpretative issues in formalist jurisdictions such as the state of New York.[15] Third, to the extent that a default textualist rule is meant to enhance the parties' contractual freedom to construct the evidentiary base, such a rule does not exclude that parties may opt for interpretative rules that include (some) contextual information. The exercise of this contractual freedom, however, increases the scope of court's interpretative discretion and hence increases uncertainty around the court's type.

Fourth, in an increasingly relevant class of contracts—which in prior work we term "new economy contracts (or collaborations)"[16]—parties may be unable to write agreements that specify their contractual obligations in detail or, anyway, might not know which evidence will matter in the execution of the contract.[17] Rather, parties structure new economy contracts as framework arrangements that, in the presence of significant uncertainty with regard to the parties' ultimate exchange, describe the cooperative behavior in which parties are supposed to engage.[18] Hence, these agreements often have, at best, loose obligational content. For this class of contracts, a textualist interpretative choice is impossible by the nature of the exchange rather than by law.

In each of these four cases, contracting parties face what we term "unavoidable contextualism."[19] Thus, our Article begins where prior discussions of formalism end. We examine how courts and legislatures should design interpretive rules when parties cannot contract out of contextual interpretation *and* there is uncertainty regarding the contract's obligational content, the court's choice of legal rule and the application of that choice to the facts. Relevant doctrines for this inquiry include contract modification, excuse, implied terms and the use of extrinsic evidence.

To understand the added complexity that unavoidable contextualism poses, recall that parties, when free, trade-off accuracy in interpretation against contract-

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[14] This conclusion emerges more clearly when one considers interpretative problems of language in addition to the classic problems of meaning. The classic account of the interpretation problem is that it is about what the contract mean. In some cases, however, disagreement may arise about the language in which it was written, with the same term meaning different things in different languages. *See* Schwartz & Scott, 2003, at 570. In these cases, textualism will not help to reduce the space of court's discretion. *See also* infra ---.

[15] That is, we take litigation on interpretative issues in formalist jurisdictions as consistent with the view the parties inconsistent beliefs on the court's interpretive type prevented efficient contract renegotiation.

[16] Schwartz & Sepe 2021.

[17] As put by Gilson, Sobel and Scott, "under high uncertainty the parties themselves can neither set prospective rules to govern their conduct, nor even specify the relevant context by which conduct might be assessed. … In these circumstances, parties are contracting over the creation of something whose features, and the contributions of each of the parties, are unknowable and will emerge only after many iterations between the contracting parties." See Gilson, Sobel and Scott, *Text and Context: Contract Interpretation as Contract Design,* 2014, at 63.

[18] Schwartz & Sepe 2021.

[19] Another way to put this concern is that the problem of court types arises whenever a case presents a mix of text and context such that the court has some discretion over determining what that mix is. *Cf.* Gilson, Sabel and Scott, 2014, at 28 (suggesting that that the divide between the contrasting contractual prototypes considered by textualists and contextualists is too crude to capture the reality of current contracting practices).

writing and adjudication costs.[20] Accurate interpretations are desirable but costly to obtain. We show that parties should appreciate three additional aspects of the interpretation problem. First, permitting courts to consider context extensively creates a coordination problem. As we saw, allowing a larger evidentiary base for court interpretation may introduce further uncertainty on the court's type. This, in turn, may lead the parties to litigate—that is, fail to coordinate—even when they are symmetrically informed on their own types and there are gains from renegotiation.[21] Second, parties may have limited control over both writing costs (consider new economy collaborations) and adjudication costs (consider that parties might be unable to alter interpretative rules). These practical and legal constraints limit parties' ability to mitigate their coordination problem by narrowing the interpretative context. Third, to the extent court discretion in interpretation is never an empty space (even when parties can choose interpretive rules), rules of ordinary interpretation cannot fully solve the parties' coordination problem.

We suggest a novel response to these factors: a rule of "interim interpretation." When contextualism is unavoidable, parties should be able to obtain a judicial interpretation of their contract *before a breach occurs*. Interim interpretation would commit the court to the same evidentiary base and the same application of the contract to that base if the parties later litigate a contract breach. In the theoretical terms we use here, interim interpretation would permit the court to reveal its type, thereby eliminating the parties' epistemic conflict and facilitating their coordination on an efficient path forward.

Regarding implementation, interim interpretation could take the form of a declaratory judgment, which would state the court's authoritative opinion regarding the resolution of an interpretative dispute, without requiring the parties to do anything. Alternatively, interim interpretation could take the form of a reformation remedy, although this would extend reformation doctrine: the court would not be correcting a mistake that parties made at the contracting stage, but rather conforming a contract to the state of the world that turns out to occur.[22]

Returning to our manufacturing example adds clarity to how interim interpretation could function in different contractual environments. Recall that the parties had inconclusive—that is, subject to interpretation—discussions about the type of software the seller could produce and about prices. The contract does not include any modification provisions. Therefore, the parties may have divergent beliefs on what a court will take their written contract to require. If so, the divergence between the parties' expected litigation payoffs could be so large as to cause them to litigate the contract. If instead the parties could request interim interpretation, the parties could put their differing interpretations before the court

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[20] Scott & Schwartz, 2010 at 930.

[21] If parties are asymmetrically informed also on their types, as is typically the case in new economy contracts, the coordination problem is exacerbated as we explain in Part I.B.2 and, in more details, in Part IV.A.

[22] We have previously suggested that reformed reformation might be desirable to improve the efficiency of new economy contracts in Schwartz & Sepe, Contract Remedies for the New Collaborations, 2022.

before their relationship breaks down. The judicial result will be an "interpreted contract," with which the parties must comply.

This simple example considered the case when the interpreted contract could support an efficient interpretation. Of course, the risk exists that interim interpretation might be inaccurate. The example also does not capture situations where the interpretive enterprise is not about recovering a preexisting context but rather context that the parties develop as they go along in their relationship—as is typically the case in new economy collaborations. Further, parties to many contracts can be asymmetrically informed on their own types, so that a joint party type and court type problem arises. Interim interpretation helps efficiently to incorporate contextual information, but it does so through different channels.

In an exchange economy, where parties trade non-specialized goods and trading takes place in developed markets, parties expect that they will trade either with their contract partner or with a similar firm. Because a deal is certain, parties invest efficiently to maximize deal value. Hence, when the court's interim interpretation does not maximize deal value, parties will engage in efficient renegotiation of their (erroneously) interpreted contract. In this sense, solving the coordination problem takes priority over accuracy in an exchange economy. Once asymmetric information on expected litigation payoffs is removed, the parties can engage in efficient Coasean bargaining, regardless of whether the court delivers an accurate interpretation.[23]

In an investment economy, by contrast, sellers produce specialized goods so the value of the exchange also depends on the level of investments parties make ex-ante, i.e., before uncertainty on the state of the world resolves. When payoff relevant variables are unverifiable, and one party moves first by sinking costs in the relationship, the well-known hold-up problem can exist.[24] Anticipating hold up, the first mover will not invest initially. Thus, in an investment economy, the question is whether interim interpretation can ameliorate the parties' hold-up problem.

If courts do not make systemic mistakes in interpretation, interim interpretation would facilitate optimal contract design for investment economy contracts.[25] In this economy, parties understand that their contract might be state-contingent inefficient ex-post, and so require renegotiation to achieve efficiency. The renegotiated contract, if efficient, will generate surplus that the parties will divide. In the manufacturing example, the buyer thus may anticipate that she will have to leave some renegotiation surplus to the manufacturer, with the result that the buyer might strategically underinvest in the relationship. Under an interim interpretation remedy, instead, the buyer anticipates that if the contract turns out to be state-contingent inefficient ex-post, she will ask the court for an interim interpretation of the contract. Under the reasonable assumption that the court is not *systematically* mistaken in interpreting the contact, the interpreted contract will

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[23] In these circumstances, the gain from interim interpretation relative to textualism are just distributive, but, as we saw, parties may not be able to opt for textualism in interpretation.
[24] *See* sources cited *infra* at note ---.
[25] The term "investment economy" refers to contracts in which a party agrees to specialize goods for its contract partner. The term "exchange economy: refers to contracts in which parties trade finished goods or commodities to each other.

move the parties' default bargaining point closer to state-contingent efficiency.[26] When anticipated at the investment stage, this will reduce the scope of ex-post renegotiation and hence mitigate the risk of underinvestment. In our example as long as the buyer expects the court to incorporate at least *some* contextual information into its judgement, the buyer will have less incentive to underinvest when interim interpretation is available than under a textualist rule.

In new economy collaborations, two additional complexities attend the interpretive enterprise. First, the context the court must recover is created by the parties as they go along. Second, parties to collaborative contracts often are asymmetrically informed about their types. Frequently the source of this asymmetry is technological: the complexity of the joint productions that are typical of collaborative contracts tends to involve private information on the parties' technology.[27] Under these circumstances, the problem of court type is exacerbated. This is because when the parties have inconsistent *first-order beliefs* on their types (i.e., what their collaboration is about), they will *always* have inconsistent second-order beliefs on court interpretation.

Therefore, in the new collaborations, interim interpretation does not just function to accelerate the parties' discovery of the court's type. In addition, the availability of this remedy prompts a process under which the court's revelation of its type serves to facilitate a possible path forward by inducing the parties to reveal private information on their own types. When information is verifiable, the court can force disclosure of relevant information and then pass it along to the parties, serving an information forcing function. When information is not verifiable, interim interpretation may involve a mediation process under which the court proposes to the parties a forward-looking assessment of their arrangement, removing uncertainty on the parties' rights and thereby facilitating the parties' voluntary disclosure of information.

We conclude this introduction with a remark. Risk neutrality is the right premise for analyzing interpretative disputes between sophisticated commercial parties.[28] However, in some cases of unavoidable contextualism—such as interpretation disputes involving new collaborations,—there sometimes is a large, diversified party and a smaller, non-diversified counterparty, for which the other

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[26] The assumption that courts are not systemically mistaken in interpreting contracts is reasonable. First, in an investment economy, parties' relationships d evolve over time. When new information materializes in the execution of the contract the court at midstream could be better informed than the parties at signing (although always less than the parties themselves during the execution of the contract). Second, under interim interpretation the court's role extends to constructive participation during the parties' relationship, rather than being limited to acting after the relationship is broken. This is consistent with the claim of contract theorists that courts should be a part of the parties' contract framework itself—the "game" in the jargon of economists. Accordingly, the availability of interim interpretation may open new possibilities to implement some of the mechanism design protocols the economic literature has identified to mitigate the issue of ex-post unverifiability of the parties' information. See Schwartz & Sepe, J. Reg (2021).

[27] *See infra* note -- and accompanying text.

[28] As noted by one of us elsewhere, only when a correct interpretation is particularly important to firms, will a firm act as if it were risk averse and be willing to incur costs to reduce expected uncertainty. Schwartz & Scott, 2010, 947-48.

party is the principal partner. And, of course, if we move to the realm of transactions involving consumers, risk aversion is the more accurate premise. These considerations raise the question of the role interim interpretation could play when one or both of the parties are risk averse.

We suggest that interim interpretation could have favorable distributional consequences when parties have heterogeneous risk preferences (e.g., if one is risk neutral and the other is risk averse). Under heterogeneity, a risk averse party could be willing to accept less money from the risk neutral party that its bargaining power alone could command because receiving this money—technically, a "certainty equivalent"—reduces uncertainty for the risk averse party. Interim interpretation, which is designed to solve ex-post uncertainty (i.e., around court interpretation), should ameliorate this distributive concern. However, granting both parties the right to participate in the interim interpretation process might frustrate this property of interim interpretation. This is because if the risk averse party anticipates the likelihood of an unfavorable interim interpretation vis-a-vis the risk neutral party, she may lack the incentive to request interim interpretation initially and, instead, prefer to accept the lower certainty equivalent. A tentative solution to this problem would be to grant the risk averse party a private right to ask the court for interim interpretation, under which the risk neutral party would not be part of the interim interpretation process.[29] This modification of interim interpretation would help mitigate the risk averse party's bargaining disadvantage by providing this party with private information (i.e., how the court intends to interpret the contract) that is not immediately accessible to the risk neutral party.

The rest of this Article proceeds as follows. In Part I, we discuss how the interpretation problem changes once one considers the problem of court types in addition to that of party types, distinguishing between traditional and new collaboration contracts. In Part II, we make the interpretive task more precise, introducing a stylized illustration to show how private information on the court type may cause symmetrically informed parties to litigate even when there are gains to share from renegotiation. In Part III, we introduce our proposal for a rule of interim interpretation, explaining how it could solve the parties' coordination problem and how this matters differently depending on whether we are considering a contracts in the traditional exchange and investment economies or framework arrangements for new economy collaborations. In Part IV, we tentatively explore the role of interim interpretation when parties have heterogenous risk preferences.

I. THE INTERPRETATION PROBLEM, REVISITED

[29] The risk neutral party, however, would retain the right to initiate her own unilateral action for interim interpretation, which, at the equilibrium, would help ensure that both parties engage in truthful reporting. See infra Part IV.B.

A. The Classic Approach

To fix ideas, it is useful to begin with a simple example that captures the classic account of the interpretation problem in traditional economy transactions.[30] Consider a contract between a seller (he) and a buyer (she) under which the seller agrees to sell ten widgets to the buyer for a price.[31] The buyer rejects because, she claims, the contract required the seller to tender green widgets but the seller delivered aquamarine widgets instead. The seller responds that the contract required him to deliver just the widgets he tendered. The parties' renegotiationefforts fail and the seller sues for damages. A court thus has to interpret the contract to identify the obligations it created.

The function of interpretation is to recover the parties' intentions: here, which widgets the seller should have delivered. In most jurisdictions, interpretation is a matter of law,[32] but the question for the court is factual: what did actual persons mean by the contract they wrote. Using the terminology of this paper, the court's task is to find the parties' "type," where type is short hand for "intended to trade."

The court infers the parties' type from three "signals":

(i) The seller's performance. What the seller tendered is relevant to the question of what the contract required the seller to tender;

(ii) The context. Context is multifaceted, including custom, pre-contractual communications, prior dealings between the parties and the nature of the trade in which the parties functioned;[33]

(iii) The written contract.

A court's task is to aggregate the three signals to ascertain the parties' type. The court then matches the type to the performance. In our example, the seller is in breach if the parties were a type that intended to trade green widgets, but the buyer would be in breach if the parties' type intended to trade aquamarine widgets.

This brief analysis permits us to note two important features of the interpretive enterprise. First, interpretation occurs after breach. Interpretation reveals the court's "type"—how the particular court conducts an interpretive exercise—and may correctly reveal the parties' type, but this information *is not* productive. That is, the parties cannot use a clarification that they meant to trade ten aquamarine widgets because the parties no longer are trading anything. Rather, the function of normal, or "ex post, interpretation is to decide which party must pay money to the other: the seller if the court accepts the buyer's interpretation, the buyer otherwise.

Second, courts and commentators agree that the performance and contract signals are relevant to interpretation, but there is a divide regarding context. Before

[30] The literature on contract interpretation is too vast to be cited in its entirety. For some seminal works, *see e.g.,* Schwartz & Scott, 2003; 2010; Oliver W. Holmes, Jr., *The Theory of Legal Interpretation*, 12 HARV. L. REV. 417, 417 (1899); Richard A. Posner, *The Law and Economics of Contract Interpretation*, 83 TEXAS L. REV. 1581, 1606 (2005); Steven J. Burton, *Breach of Contract and the Common Law Duty to Perform in Good Faith*, 94 HARV. L. REV. 369 (1980).

[31] Part 2 later makes traditional economy transactions more realistically complex.

[32] UCC cite

[33] As an illustration of how the first two signals relate to intention, if widgets come in 100 colors, that the seller delivered one color says little about what the contract required, but if widgets come in only two colors, that the seller delivered one of them suggests that the contract required that color.

coming to it, we should clarify the nature of an inquiry into context. The court's task when interpreting traditional economy contracts is to recover a past state: the context that existed when the parties contracted. Such an inquiry is essentially historical: what America was like in 1776; what the commercial milieu was like when the widget buyer and seller made their deal.

Courts and commentators today disagree on two issues.[34] The first is who is or should be in charge of the inquiry: the court or the parties. For example, let our widget parties' contract contain a merger clause, telling a court to base its interpretation on the performance, the contract and only those aspects of context that are essential for any plausible interpretation.[35] Regarding context, industry evidence may show that agents use industrial widgets to clean steel surfaces. If the seller tendered decorative widgets (in any color) but the buyer uses steel machines, the court likely would infer breach. If the seller tendered industrial widgets, then the court would have to interpret the contract to see which color the contract required. The parties are in charge in jurisdictions such as New York, in which courts enforce merger clauses; the court is in charge in jurisdictions such as California, in which the court regards a merger clause as evidence of the parties' intentions regarding how much context a court should consider.[36] Courts and commentators disagree about which approach is best.

The second, related, dispute concerns how much context a court should consider when the court is attempting to identify the parties' type. The parties face a tradeoff: the more context the court sees—e.g., custom, past practices—the more accurate the court's interpretation is likely to be; but the more context the court is willing to see, the more costly interpretation is for the parties. Hence, the parties must decide whether to include context evidence in the contract itself or plan to prove context at trial. The cost of either approach is increasing in the willingness of a court to admit context evidence. Again, in some jurisdictions, courts delegate the choice to the parties of how to communicate context evidence to the court by obeying the parties' "interpretive instructions" such as those a merger clause gives. In other jurisdictions, courts make this tradeoff for the parties.

Jurisdictions in which courts are in charge—they will disobey the parties' interpretive instructions—and in which courts use as much context as they consider helpful are called "contextualist;" jurisdictions in which courts obey instructions and in which their interpretations are based largely on the performance and contract signals are called "textualist." For both contextualist and textualist courts, however, the interpretive task is the same: to recover a past historical state—the context that existed when the parties made their deal.[37] The divide is over how much context evidence a court should use when performing this task.

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[34] *See* Schwartz & Scott, 2003; 2010.

[35] Technically, a merger clause recites that a contract is completely "integrated": all of the parties' prior understandings are merged into the written contract itself.

[36] Cites

[37] In this sense, both textualism and contextualism are version of *originalism*, meaning that they both "ground contractual obligation in facts that were in place when the contract was formed." Gideon Rosen, Textualism, Intentionalism, and the Law of the Contract 164, PHILOSOPHY OF LANGUAGE AND THE LAW (2011). As we shall see, this does not apply to the interpretive task in new economy contracts, where interpretation is forward looking rather than backward looking. *See infra*

B. Toward a New Approach

1. Traditional Economy Contracts

The classic account of the interpretation problem does not consider that ex ante parties may have divergent beliefs on the court type: how the particular court will conduct the ex post interpretive exercise. This adds further complexity to the interpretive enterprise by introducing a coordination problem: under divergent beliefs on the court's type, the parties probably assess their expected litigation payoffs differently. As a result, they may litigate a contract although they are symmetrically informed about their own types and there are renegotiation gains. To address this problem, we propose to introduce a rule of interim interpretation, under which the parties could require the court to reveal its type before a breach occurs.

To introduce how interim interpretation differs from current interpretation, and using the simple transaction in our example above, suppose that the parties contract at t^0 and anticipate performance at t^2. At t^1, a party receives a signal suggesting that the other may breach. For example, the buyer learns that the seller has not consulted suppliers of inputs used in making green widgets. Under current law, the buyer must wait until t^2 to see what the seller tenders. If interim interpretation were available, the buyer could ask the court, at t^1, for an interpretation that the contract required green widgets. The court would make an interim interpretation in the same way as it would have made a standard interpretation, with the exception that there will not be a performance signal. Otherwise, the court would infer the parties' type from the contract and as much context as would be permitted in the jurisdiction—contextualist or textualist—in which the court sits. Interim interpretation thus does not change the interpretive task for traditional economy transactions; rather, it accelerates the time when the court performs that task.

We stress two features of interim interpretation that contrast with standard interpretation. First, interim interpretation occurs before breach. Therefore, the information it reveals could be *productive* rather than distributional. An interim interpretation would reduce the parties' asymmetric information regarding the court's type and reveal other relevant information before breach. The parties thus could take efficient breach avoiding or breach ameliorating steps. For example, the seller could attempt to produce conforming green widgets if the court held that green widgets would be required. Or the buyer could adjust its facilities to suit aquamarine widgets if the court held that those would be conforming. Second, when it would be efficient to perform the deal, interim interpretation would make performance more likely. Conversely, when it would be inefficient to perform, interim interpretation advances the time when parties can reallocate their resources to other uses.

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notes --- and accompanying text. More generally, as put by Rosen, originalism is limited "in making sense of the application of old contracts to factual situations that were not and could not have been contemplated either by the parties themselves or by their linguistic communities." *See id.* In new economy contracts, these situations are the rule rather than the exception.

2. *New Economy Collaborative Contracts*

The interpretive task differs for new economy collaborations. The court's task in the new economy is not to recover a preexisting context but to facilitate a possible path forward in an environment where parties create context as they go along. Therefore, the interpretive enterprise for collaborative contracts always includes elements of judicial creation. None of the typical signals courts use in interpretation might be available: not just the performance (as in traditional economy contracts) but a pre-existing context or a written agreement as well (at least one with a specific, rather than loose obligational content).

Further, parties to collaborative contracts often are asymmetrically informed about their types. Frequently, the source of this asymmetry is technological: the complexity of the joint productions that are typical of collaborative contracts involves private information on the parties' technology. For example, consider a modified version of our introductory illustration under which the seller agrees to produce a new software program for the buyer. Because we are in unchartered territory, the buyer will expect that a seller could make the new software in various possible versions, each of which would affect the buyer's return differently. This information, however, is private to the buyer. Similarly, the seller will believe that it is technically feasible to produce software that could perform various useful functions for manufacturers in the buyer's industry. However, which exact attribute functions any new software will be able to perform for the buyer is the seller's private information. Under this informational asymmetry, it will be more likely that a party may interpret an imperfectly observed counterparty's action negatively and, hence, that parties may come to hold inconsistent beliefs about their relationship's prospects for success . This exacerbates the problem of asymmetric information regarding court type. When parties have inconsistent first-order beliefs on their own types, they necessarily have inconsistent second-order beliefs regarding court interpretation. Hence, renegotiation of the new collaboration agreements will be more likely to fail than renegotiation of traditional economy contracts. .

Interim interpretation for collaboration agreements thus must solve the joint problem of identifying party types and court types. The availability of interim interpretation, we show, creates a process under which the court's revelation of its type serves to facilitate a possible path forward by inducing the parties to reveal private information on their own types. When information is verifiable, the court can force disclosure of relevant information (e.g., through discovery rules) and then communicate it to the parties. Thus, an interim interpretation actionserves an information forcing function. Because courts perform this function before breach, the information interim interpretation reveals is, again, *productive* rather than only distributional: it allows the parties to find a profitable way forward, if one exists.

However, induced disclosure may not induce the parties to reveal their private information when the information is proprietary and not verifiable. For example, if the buyer fears that the seller may opportunistically use the buyer's private information to secure deals with the buyer's competitors and the information is not verifiable, the buyer may strategically withhold this information. In this case, the function of interim interpretation switches from an information forcing device to a mediation device. The court's interim interpretation would serve as a proposal for a forward looking assessment that could remove some of the obstacles to having a truthful revelation mechanism. A court thus could construe the contract to contain an implied no competition clause, under which the seller cannot enter into an agreement with other buyers for some period. At this point, the buyer would no longer have a reason to withhold or manipulate (unverifiable) information, which would facilitate renegotiation. The parties could then "take it from there," bargaining to the pareto frontier, or efficiently breaking up. Of course, the court's mediation may fail, but it will not fail because first-order inconsistent beliefs on party types engender second-order inconsistent beliefs on the court type that prevents the parties from finding an efficient way forward.

II. UNKNOWN COURT TYPES AND INCONSISTENT BELIEFS

In Part II, we make the interpretive task more precise. This permits us better to show how interim interpretation functions in different transactional environments, and also permits us to advance the current debate between the two interpretive schools: contextualist and textualists. We offer new reasons for a court to prefer the latter.

A. Text, Context and Disagreement

We now consider the interpretation problem when the issue of court types is included. It is helpful to introduce this analysis with a stylized illustration. We, again, consider an agreement between a buyer and a seller for the production of specialized goods.[38] Both parties are risk neutral. The seller can produce two kinds of widgets: w_1 and w_2. If production does not take place, by convention, we say that widget w_0 (i.e., the null widget) is produced. The production of the optimal widget is state dependent and there are three possible states of the world: ω_1, ω_2, or ω_0, which are equi-probable. The parties observe the realized ex post state.[39] The buyer pays the price K up front. We also assume:

A1: Producing w_1 in state ω_1 is socially and privately efficient for both the buyer and the seller. There is no conflict because the parties' interests are aligned: they both want to consume and produce w_1.[40]

A2: Producing w_2 in state ω_2 is socially efficient and privately efficient for the buyer, although it would be more costly for the seller. In this state, then, there is a conflict because the buyer prefers to purchase w_2 while the seller prefers to produce w_1 given the contract price K.[41]

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[38] In this illustration, we suppose a relational contract, but there is no loss of generality if the contract is one shot.

[39] For brevity, we denote $v(\omega_i, w_j)$ (resp.: $c(\omega_i, w_j)$)— as the buyer's utility (resp.: the seller's cost) in state ωi when she consumes (produces) widget w_j— as v_{ij} (resp.: c_{ij}), where the first subscript, *i*, denotes the state of the world (i.e., 1,2, or 0) and the second, *j*, denotes the kind of widget consumed (resp.: produced) (i.e., 1,2, or 0). For example, v_{11} (resp.: c_{11}) denotes the buyer's utility (resp.: seller's cost) in state ω_1 when she consumes (produces) w_1.

[40] Formally, A1 means that in state ω_1, $v_{11}>v_{12}>K>c_{11}>c_{12}$ holds.

[41] Formally, A2 means that in state ω_2, $v_{22}>c_{22}>K>v_{21}>c_{21}$ holds, with $(v_{21}-c_{21})<(v_{22}-c_{22})$.

A3: In state ω_0, it is socially efficient not to produce. Hence, if the contract requires the delivery of a widget, it would be socially efficient to terminate the contract.[42] The buyer, however, may want the seller to deliver widget w_1, while the seller would prefer to produce w_0 (i.e., nothing). [43]

These assumptions capture typical contracting situations. In A1, the parties' interests are aligned; thus, the parties face no ex-post contracting problem. A2 captures a situation similar to the manufacturing example we discussed in the Introduction, in which the contracting problem was to keep the contract price roughly congruent with the seller's cost of performance. Under A2, the buyer prefers the more costly widget w_2 (i.e., the new software) because an unforeseen contingency has occurred (i.e., the development of a new operating system) that makes production of w_2 more efficient than production of w_1 (the old software). In similar cases, then, the interpretation problem is to identify *which* performance the contract requires. A3 captures another typical contracting problem: to not require inefficient performances. For example, consider again the manufacturing setting in the Introduction. Suppose that that the Covid19 pandemic radically raised the manufacturer's costs. In this case, it would be socially efficient to excuse the manufacturer, but the buyer may demand performance. The interpretation problem for case (iii) is to determine *whether* performance is due.[44]

The interpretation problems under A2 and A3 can arise when a contract is obligationally complete but economically incomplete. A contract is obligationally complete if the contract sets a price (here, K) and a quantity (here, either w_1 or w_2). The same contract could be economically incomplete, however, if it does not provide for a verifiable state-contingent plan of action or it partitions future states of the world too coarsely.[45] In our motivating example, the contract is economically incomplete because it does not specify whether the seller must deliver w_1, w_2 or w_0 depending on which of ω_1, ω_2 or ω_0 materializes. Practically, this means that, on the one hand, the parties did not fully specify the technological differences between w_1 and w_2 and, on the other, that they did not foresee the occurrence of ω_0.

The timing of the game we analyze is as follows:

t^0: The parties sign a contract to trade the production of widget w_1 or w_2 at price *K*;

t^1: The state of the world (ω_0, ω_1, or ω_2) is realized and the seller announces the production of either widget w_0, w_1, or w_2 (or the buyer demands the production of either widget w_1 or w_2);

t^2: Parties may renegotiate or litigate the contract;

t^3: The seller delivers a widget and the parties move to a new stage of ````````the game, unless the contract is litigated.

If the contract is not litigated, the parties will continue their relationship. Their "continuation value" is the expected gains from future deals, and also the

[42] In alternative, if the contract is not rescinded, it would be efficient for the seller to breach the contract and pay damages to the buyer (i.e., efficient breach).
[43] Formally, A3 means that in state ω_0, ω_0, $c_{02} \geq c_{01} > v_{01} \geq v_{02} > K$ holds. Indeed, note that as $v_{00}=0$ and $c_{00}=0$, the contract surplus is maximized with no exchange.
[44] It may actually be efficient to subsidize the seller's production in this case.
[45] Schwartz 1992.

value from saving litigation costs.[46] We denote the continuation value as V_B (resp.: V_S) for the buyer (resp.: the seller). If, instead, the contract is litigated, the court will award expectation damages if it finds breach.[47] When production does not take place, , the buyer is also entitled to restitution of the price.[48]

Finally, at the execution stage (i.e., between t^0 and t^1), the parties have developed transactional practices andprocedures that provide clarifying contextual information on the contract's obligational content (where this context is common knowledge) [49]. For example, the parties may discuss the contractual quality standard; have meetings to consider updates in production stages as well as the buyer's quality requirements; schedule visits to the seller's manufacturing plant for control quality checks; entertain oral modification agreements when external circumstances change, and so on. Together, these practices and procedures may permit the parties to implement a complete state-contingent plan of action for executing the contract. Put another way, if the parties had anticipated the contextual information arising during the execution of the contract at t^0 and incorporated this information into their written agreement, their contract would have been both obligationally and economically complete. It would have specified that: (i) in state ω_1, the seller's must produce widget w_1; (ii) in state ω_2, the the seller must produce w_2 (possibly at a higher price); and (iii) in state, ω_0, the seller should not produce (i.e., produce the null widget), and return K to the buyer.

, The interpretation literature has largely focused on parties having private information on their types when examining contracting problems such as those in this illustration. This focus raises the question of how courts can best recover the parties' intentions and thereby facilitate value-maximizing exchanges.[50] Put another way, the interpretation problem entails ensuring judicial accuracy given informational asymmetry about party types. The interpretation problem is more complex than this, however. The increased complexity stems from a different information asymmetry issue: the private information courts have on their interpretative behavior (i.e., how a court will apply the relevant doctrine in light of the relevant facts). Under this different private information concern, as we show, interpretation has two facets: ensuring accuracy regarding party types, and coordinating the parties' behavior given their divergent beliefs on court interpretation. Because of the latter epistemic conflict, rational parties may litigate a contract even when they are symmetrically informed about their types and there

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[46] Because the continuation value includes litigation cost savings, the value is always strictly positive.

[47] Given the structure of our analytical representation, this assumption comes without any loss of generality.

[48] Get Hermaling quoted on restitution remedy.

[49] For simplicity, here we assume that contextual information is limited to information arising during the execution of the contract. Our conclusion, however, does not change under an expanded definition of contextual information that also includes the parties' pre-contractual conduct and negotiations, their practice under prior agreements or industry custom that is relevant to determine the meaning of an agreement's terms. See Schwartz & Scott, 2003 at 572.

[50] The terms in a commercial contract perform two functions. They describe what the parties intend to trade, and they create incentives for parties to maximize expected surplus. As interpretive accuracy increases, the incentive effect of the contract terms also increases. See Schwartz & Scott, 2010, at 942; Schwartz and Watson..

are gains to share from renegotiation—that is, even when the classic interpretive approach predicts parties will *not* litigate their contract.[51]

B. Party Types, Court Types and Interpretation

1. Party Types and Accuracy

Under the classic approach to contract interpretation, the central scholarly question is whether the textual or the contextual interpretative practice better facilitates accurate identification of party types. Returning to our illustration, When the ex post state ω_1 materializes, no interpretation issue arises because the parties' interests are aligned; the contract is self-enforcing. The problematic cases are (a) when ω_2 materializes and it would be efficient to trade w_2 (i.e., the software compatible with the new operating system) but the seller prefers to produce the less costly widget w_1.This raises the interpretative question of which performance is due; and (b) when ω_0 materializes and it would be efficient to trade w_0 (i.e., that the seller be excused from performance) but the buyer prefers performance. This case raises the interpretative question of whether performance is due. The answers change with the interpretative regime.

<u>a. Textual Interpretation (First-Order Beliefs)</u>. Under a textual interpretation, ,

(i) because the contract leaves discretion to the seller about whether to produce w_1 or w_2 (i.e., the contract fails to condition the production of the widget on the state of the world that realizes ex-post), the parties will believe that in state ω_2, because the price is fixed, the buyer cannot require the seller to deliver w_2.[52]

(ii) because the contract is silent on efficient non-performance, the parties will believe that in state ω_0 the seller cannot require the buyer to accept w_0 (i.e., if the seller does not deliver a widget in ω_0, he will breach the contract).[53]

<u>b. Contextual Interpretation (First-Order Beliefs)</u>. Conversely, under contextual interpretation, the parties will take into account the state-contingent practices they have developed in the execution of the contract, so that:

(i) both parties will believe that in state ω_2 the buyer can claim w_2 from the seller (possibly at a higher price);[54]

(ii) both parties will believe that in state ω_0 the seller can legitimately claim to deliver w_0 -- nothing -- while returning K to the buyer.[55]

Considering the context in addition to the text makes the contract more accurately reflects the parties' intentions. Increased accuracy, however, is expensive. In our illustration, writing a more detailed contract that efficiently

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[51] See Scott, 2000, at 865 ("If both parties are equally informed, judicial intervention is superfluous, since renegotiation will succeed.")
[52] Formally, $\mu_B(w_2|\omega_2, \textit{text}) = \mu_S(w_2|\omega_2, \textit{text}) = 0$.
[53] Formally, $\mu_B(w_0|\omega_0, \textit{text}) = \mu_S(w_0|\omega_0, \textit{text}) = 0$.
[54] Formally, $\mu_B(w_2|\omega_2, \textit{context}) = \mu_S(w_2|\omega_2, \textit{context}) =1$.
[55] Formally, $\mu_B(w_0|\omega_0, \textit{context}) = \mu_S(w_0|\omega_0, \textit{context}) =1$.

conditions on the ex-post state requires parties to engage in costly specification of the technological differences between w_1 and w_2, as well as to expend resources to foresee unlikely circumstances like the realization of ω_0. Further, trials are expensive and extending the evidentiary base to contextual information increases a party's expected adjudication costs. For example, extending the evidentiary base to the parties' practices in the execution of the contract is likely to result in a lengthier and hence more costly trial.[56]

So framed, then, the parties' interpretation problem involves a trade-off between accuracy (on party types) and writing and adjudication costs, where textualists and contextualists disagree on which interpretative regime is better suited to optimize this tradeoff. Our focus, however, is not on that debate.[57] Instead, we aim to show that when the problem of court types is added to that of party types, the parties' interpretation problem becomes more complex and so does the relationship between textualist and contextualist interpretative choices.

2. Court Types and Coordination

The problem of court types arises because courts have private information on their interpretative behavior, including (i) the kind of evidence a court will admit (and the weight it will give to different pieces of evidence), (ii) how the court will evaluate facts in light of the admitted evidence, and (iii) how it will apply contract law's doctrines under that evidence. Because of this additional informational asymmetry problem, the parties hold divergent *second-order* beliefs on the court's interpretive practice and hence on the parties' expected litigation payoffs. Most importantly, they may hold differing beliefs although they share consistent first-order beliefs on the contract's obligational content. Under an approach to interpretation hthat takes asymmetric information about the court's type into account, , we reexamine the implications that choosing a textualist or a contextualist interpretative regime poses, again using our illustration.

<u>a. Textual Interpretation (Second-Order Beliefs)</u>. Under a textualist regime, such as that used in formalist jurisdictions like New York,[58] the parties anticipate that the court's interpretative behavior will be constrained by the text of the contract. This means that parties expect the court to interpret their contract under a hard parol evidence rule,[59] use the plain meaning rule, and enforce merger

[56] Under textualist interpretation, parties will likely expect the court to make interpretations on a motion for summary judgment because the court will only use a limited evidentiary base. Conversely, when the evidentiary base is extended to contextual information, court interpretation will typically be rendered only after a trial. Schwartz & Scott, 2003, at 581.
[57] One of us has extensively engaged in thethis debate defending the normative desirability of a textualist position. See Schwartz ---, ---, ----.
[58] Schwartz & Scott, 2010, 959-60.
[59] The hard parol evidence rule holds that when parties fully integrate a final written agreement, they cannot later prove understandings that the integrated writing did not contain. *See, e.g.,* Arthur L. Corbin, *The Interpretation of Words and the Parol Evidence Rule*, 50 CORNELL L.Q. 161, 171 (1965); Eric A. Posner, *The Parol Evidence Rule, the Plain Meaning Rule, and the Principles of Contractual Interpretation*, 146 U. PA. L. REV. 533, 534 (1998). See also Morgan Stanley High Yield Sec., Inc. v. Seven Circle Gaming Corp., 269 F. Supp. 2d 2o6 (S.D.N.Y. 2003) (holding that the prior agreement is excluded where the writing appears, in view of thoroughness and specificity,

clauses.[60] These practices constrain the space of possible interpretations (relative to jurisdictions where courts use contextualist interpretation and are not limited in the evidentiary base they admit).[61] When the interpretative question is which performance is due, the parties will expect the court not to admit evidence of ex-post oral modifications. Likewise, the parties will presumably expect the court not to consider evidence of subsequent practices that would expand the court's interpretive resources. Similarly, concerning the interpretative question whether a performance is due, the parties will expect the court not to excuse performance. Generally, parties seek excuse from performance when an unforeseeable event occurs after the time of contracting and causes performance to become either impossible or impractical. The test for either impossibility or impracticability, however, is quite burdensome to meet, unless there is a physical inability to execute a contract or there is a government intervention that prevents performance.[62] These tests are quite difficult to meet when the court will not consider contextual information.

In formalist jurisdictions, it is thus likely that the parties' second-order beliefs regarding the court's interpretation of their obligations will be the same as their first order beliefs on (textualist) interpretation.[63] Hence, the parties will likely believe that

(i) in state ω_2 the court will interpret the contract so that the buyer cannot claim w_2 from the seller;
(ii) in state ω_0, the court will interpret the contract so that the seller cannot claim to deliver w_0 to the buyer.

Given these shared beliefs on court interpretation, the parties will likely renegotiate the contract because this will allow them to preserve their continuation value and/or save litigation costs. Indeed, through renegotiation, the buyer can induce the seller to produce w_2 in state ω_2 by paying the seller's higher cost of production for w_2[64] and leaving the seller a share of the renegotiation surplus a more

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to embody a final agreement); Intershoe, Inc. v. Bankers Trust Co., 571 N.E.2d 641, 644 (N.Y. 1991) (same); Mitchill v. Lath, 16o N.E. 646, 646-48 (N.Y. 1928) (upholding the four corners presumption and excluding evidence of collateral agreement to a land sale contract).

[60] A merger or integration clause recites that all prior party understandings are merged into the final written agreement. Merger clauses are given virtually conclusive effect in textualist jurisdictions like New York. See, e.,g., Tempo Shain Corp. v. Bertek, Inc., 12o F.3d 16, 21 (2d Cir. 1997) ("Ordinarily, a merger clause provision indicates that the subject agreement is completely integrated, and parol evidence is precluded from altering or interpreting the agreement."). In the absence of a merger clause, a hard parol evidence rule will commonly mandate that the four corners presumption supposes an agreement to be fully integrated. *See, e.g.,* Morgan Stanley High Yield Sec., Inc., 269 F. Supp. 2d at 214 ("Under New York law a contract which appears complete on its face is an integrated agreement as a matter of law.");

[61] From this perspective, we can say that a textualist regime with a hard parol evidence rule maximizes party discretion over the content of the legally enforceable contract; vice versa, a contextualist regime with a soft parol evidence rule that maximizes court discretion. See Schwartz & Scott 960.

[62] Schwartz 1992, 293.

[63] Another way to put this is that the parties will expect a textualist court to be only of one type. This is, of course, a simplification, given that the space of court discretion is never empty, but only more limited under a textualist interpretation.

[64] This is c_{22}-c_{21}.

efficient performance would create.[65] Similarly, the seller can pay the buyer's expectation damages to be excused from performance upon the realization of ω_0 (i.e., to legitimately deliver w_0, in state ω_0).[66]

b. Contextual Interpretation (Second-Order Beliefs). Under a contextualist interpretation regime, such as that preferred in anti-formalist jurisdictions like California,[67] matters are more complicated. First, parties anticipate that the court observes the contract, but only receives an informative signal about the underlying context. Second, parties know that the court will apply a soft parol evidence rule, reject the four corners test and accord at most presumptive weight to a merger clause. These practices imply that the court will admit extrinsic evidence of meaning, even when the writing appears final and complete on its face.[68] Further, when a merger clause is absent, anti-formalist courts reject the four corners presumption in favor of admitting *any* extrinsic evidence that may aid in determining the parties' intent to integrate their writing.[69] More generally, a "soft parol evidence rule functions, in effect if not formally, as an open gate: courts will consider "any extrinsic evidence that a party sees as advantageous ex post." [70]

When the court has broad discretion in interpretation, the parties may form different beliefs regarding which signal the court will act on (i.e., the contextual evidence the court is going to admit) and how it will interpret that signal (i.e., how the court will apply the law given that signal). Heterogeneity in the parties' second-order beliefs on court interpretation may have several sources: the parties' previous litigation experience (e.g., their rate of success or failure in past litigations), the parties possibly different (intangible) information about a court's interpretative behavior, their belief that they have a better legal team, and so on.

Symmetrically informed parties, as we saw, have consistent first-order beliefs on contract interpretation, but these beliefs can change depending on the interpretative regime.[71] For example, in state ω_2, the seller prefers interpretation to be based only on the text (because this would allow him to deliver the less costly widget), while the buyer will prefer the court to consider contextual information (because this would enable her to claim the more costly widget compatible with the new operating system). Conversely, in state ω_0, the buyer will prefer interpretation to be based only on the text (because this would allow her to claim the widget), while the seller will prefer the court to consider contextual information because it would excuseg him from performance. To the extent that a contextualist court will consider "any extrinsic evidence that a party sees as advantageous ex post," the parties' different preferences over interpretative regimes may also lead them to hold divergent second-order beliefs on court interpretation. This is because the parties

[65] This is $[(v_{22}-c_{22})-(v_{21}-c_{21})]/2$.
[66] That is v_{01}.
[67] Schwartz & Scott, 2010, 960-61.
[68] Id. at 960. See
[69] *See, e.g.,* Int'l Milling Co. v. Hachmeister, Inc., 11o A.2d 186 (Pa. 1955) (holding extrinsic evidence of negotiations and antecedent agreements admissible to show that the buyer had not assented to the contract as a complete integration of the contract despite the presence of an express merger clause); see also RESTATEMENT (SECOND) OF CONTRACTS S 216 cmt. e (1981) (same).
[70] Schwartz & Scott, 2010, 961.
[71] *See supra* text accompanying notes ---.

know that, depending on which kind of contextual information the court will admit, the parties will differ in their ability to support their preferences for how the court should interpret their contract.

We formalize these views by supposing that the parties do not know whether the court is of type θ_1, θ_2, or θ_3 (i.e., the parties have different assumptions on court types),[72] where we characterize court types as follows:[73]

1. A type θ_1 court (a) perfectly observes, and bases its interpretation on, the context when the buyer and seller agree that a delivery is due (i.e., in states ω_1 and ω_2), but (b*)* imperfectly observes the context and bases its interpretation largely on the text when the buyer and the seller disagree that a delivery is due (i.e., in state ω_0). This court type will, for example, admit evidence that the parties had exchanged information about the production of the new operating system (i.e., in state ω_2) and orally agreed that the seller would produce the more costly software (i.e., w_2). The court thus will hold that in state ω_2 the buyer can legitimately claim w_2 from the seller. On the other hand, the court will not apply the excuse doctrine to free the seller from the obligation of delivering the software because of an unforeseen increase in manufacturing costs (i.e., in state ω_0).
2. A type θ_2 court t (a) imperfectly observes the context and bases its interpretation on the text when the buyer and the seller agree that a delivery is due (i.e., in states ω_1 and ω_2), but (b) perfectly observes, and attaches weight to, the context when the parties disagree that a delivery is due (i.e., in state ω_0). This court type will, for example, exclude contextual evidence regarding which performance is due and hence allow the seller to deliver the less costly widget w_1 even when the buyer has developed a new operating system (i.e., in state ω_2) and the parties have exchanged communications about this possibility. On the other hand, the court will apply the excuse rule to permit the seller to deliver w_0 if there is an unforeseen increase in manufacturing costs (i.e., in state ω_0).
3. A type θ_3 court always perfectly observes, and bases its interpretation on, the context; that is, the court considers contextual evidence both when the parties agree that a delivery is due (i.e., in states ω_1 and ω_2), and when they disagree that a delivery is due (i.e., in state ω_0). In this case, then, the court, on the one hand, will admit contextual information on the parties' behavior during the execution of the contract and apply the doctrine of contract modification to hold that in state ω_2 the buyer can legitimately claim w_2 from the seller. On the other hand, the court will apply excuse doctrines to hold that in state ω_0 the seller can legitimately claim to deliver w_0 while returning K to the buyer.

[72] In particular, we assume that for the buyer, the court types, θ_1, θ_2, and θ_3 are distributed with the following proportions: p_1, p_2, and $(1-p_1-p_2)$, respectively. For the seller, the proportions are q_1, q_2, and $(1-q_1-q_2)$.

[73] Our assumptions about court types imply that type θ_1 and type θ_2 courts make mistakes in identifying the contract context, type θ_3 accurately identifies the context. While type θ_3 courts do not exist (as this would mean that there is no party type problem), saying that a case will be assigned to a symmetrically informed court with a specific probability is equivalent to saying that the court will make the right decision with such probability.

Given different distributions of these court types, the parties may thcome to hold divergent beliefs on court interpretation, even when they are symmetrically informed on ex-post contextual information (and otherwise share consistent first-order beliefs on the obligational content of their agreement, as we saw above).[74] For example,

(i) the buyer may believe that in state ω_2, the court will interpret the contract so that the buyer can claim w_2 from the seller with probability $1-p_2$. Conversely, the seller may believe that in state ω_2, the court will interpret the contract so that the buyer can claim w_2 from the seller with probability $1-q_2$.[75]

(ii) the buyer may believe that in state ω_0, the court will interpret the contract so that the seller is excused from performance (i.e., the seller can deliver w_0) with probability $1-p_1$. Conversely the seller may believe that in state ω_0, the court will interpret the contract so that the seller is excused from performance (i.e., the seller can deliver w_0) with probability$1-q_1$.[76]

These divergent beliefs may cause the parties to litigate although they would benefit from renegotiation both under (i) (when the problem is which performance is due) and (ii) (where the problem is whether performance is due). To see this, assume that ω_2 materializes, in which it would be efficient to produce w_2 (i.e., the more costly software compatible with the new operating system) but the seller announces she will produce the less costly widget w_1. The buyer must then decide whether to initiate a renegotiation or sue the seller for breach. Given the buyer's belief on the litigation outcome, the buyer will expect that if she sues the seller once w_1 has been delivered, she will receive expectation damages with probability $1-p_2$.[77] To the contrary, if the buyer does not sue, her default position will be the contract continuation value, V_B. Given her different belief on the distribution of court types, the seller will believe that if the buyer sues after w_{11} is delivered, the seller will pay expectation damages with probability $(1-q_2) < (1-p_2)$. Instead, if the seller delivers w_2 and avoids litigation, she will receive the contract continuation value, V_S, but will have to incur the additional production costs for w_2.[78]

The buyer sues when she expects to receive more from litigation that from the continuation value.[79] Once, the buyer threatens to sue, the seller will litigate (rather than produce w_2 or settle for expectation damages) when his payout from not litigating is lower than the payout he expects from litigating (i.e., paying the seller's estimation of the buyer's expectation damages).[80] When the above conditions for the buyer and the seller are satisfied, litigation is a Nash equilibrium:

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[74] See supra text accompanying notes ---.

[75] That is, $p_1+(1-p_1-p_2)=1-p_2$.

[76] That is, $p_2+(1-p_1-p_2)=1-p_1$.

[77] The buyer's expectation damages are the expectation damages $v_{22}-v_{21}$.

[78] That is, $c_{22}-c_{21}$. Notice, however, that this strategy can be dominated by paying the expectation damages whenever $(1-p_2)(v_{22}-v_{21})<c_{21}-c_{21}$. In such a case, the seller can avoid litigation by making a transfer to the buyer's equal to the expected litigation outcome, that is $(1-p_2)(v_{22}-v_{21})$.

[79] This occurs when $(1-p_2)(v_{22}-v_{21})-V_B>0$.

[80] Formally, this occurs when $\min[(c_{22}-c_{21}), (1-p_2)(v_{22}-v_{21})]-V_S>(1-q_2)(v_{22}-v_{21})$.

that is, the parties will sue when they should settle..[81] This outcome is obviously inefficient for two reasons. First, the efficient exchange does not take place. Second, parties destroy the future value of their relationship (and bear litigation costs).[82]

C. Unavoidable Contextualism

Several implications follow from an analysis of the interpretation problem that considers the issue of private information about court types, in addition to private information about party types. The interpretation problem no longer involves only a tradeoff between accuracy and writing and adjudication costs; it also involves a coordination problem. This problem arises because the attempt to increase interpretive accuracy by extending the evidentiary base *also* expands the court's interpretative discretion. Broader court discretion widens the distribution of possible court types. This in turn increases the likelihood that parties may differ materially as to their expected litigation payoffs.

This result complexifies the choice between a textualist and contextualist interpretative regime for contract interpretation. A textualist regime reduces court discretion in interpretation: the parties expect that a textualist court will be constrained—both along the dimension of relevant facts and relevant doctrines—by the restricted evidentiary base the court can admit. As a result, parties will be more likely to share consistent beliefs on their expected litigation payoffs. This enables them to better coordinate regarding any ex-post contacting problems, either by renegotiating their agreement and preserving their relationship's continuation value (as in case (i) in the illustration) or by efficiently terminating their relationship and saving litigation costs (as in case (ii) in the illustration).

Conversely, while a contextualist rule increases the expected accuracy of court interpretation, this comes at the "cost" of enhanced court discretion and hence higher uncertainty on the court's type.[83] As a result, the parties are more likely to hold divergent beliefs on their expected litigation payoffs, which may lead to a coordination failure. Acting on their divergent beliefs, the parties may litigate a contract although renegotiation or the efficient termination of their relationship would maximize welfare.

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[81] Similarly, consider the realized state ω_0, in which it is efficient to excuse the seller due to an unforeseen increase in manufacturing costs. Let the seller announce she will produce w0 (that is, nothing) and return the price K. In this case, the buyer will believe that if she sues the seller, she will receive the value of consuming a widget with probability p_1 and receive the contract price as a restitution remedy with probability $(1-p_1)$. If instead the buyer does not sue the seller, she will receive the price and preserve the contract continuation value, VB. Given her different belief on the distribution of court types, the seller will believe that the buyer, upon suing her, will receive the value of consuming a widget only with probability $q_1 < p_1$ and will instead receive only the contract price as a restitution remedy with probability $(1-q_1) > (1-p_1)$. To avoid litigation and save the contract's continuation value, the seller can settle (i.e., renegotiate) with the buyer and pay the buyer's estimation of her expected litigation value. Hence, the seller will prefer litigation for contract breach whenever her estimation of the litigation outcome is less costly than the no-litigation outcome. This leads again to an inefficient Nash equilibrium because it wastes the contract's continuation value and expends litigation costs.

[82] The total social cost from litigation in this case is $[(v_{22}-c_{22})-(v_{21}-c_{21})]+(V_B+V_S)$.

[83] *See supra* note ---.

To this extent, our analysis supports the normative desirability of a textualist interpretive regime , because this regime better enables parties to solve ex-post coordination problems. However, we emphasize that a default textualist regime cannot itself fully solve these problems. There are four reasons. First, parties cannot contract for textualist or contextualist interpretation because interpretive rules are mandatory.[84] As noted by one of us elsewhere, "the rules of the restatement, the UCC and many jurisdictions are mandatory and require courts to use broad evidentiary bases when interpreting merchant-to-merchant contracts."[85] Parties can only indirectly control how disputes over their contracts are adjudicated through the choice of a formalist or a contextualist jurisdiction. But when parties are faced with a contextualist court they cannot narrow the evidentiary base; contextualism is required.[86]

Second, the space of court discretion is never empty. Judicial discretion exists even under a textualist interpretive regime—that is, even in formalist jurisdictions which permit parties partly to control the admissible evidentiary base. Thus, while in the above illustration we have assumed that the parties will expect a textualist court to be of one type, in actuality, textualist interpretation only reduces the scope of court interpretive discretion. Consider, for example, when the interpretive problem is not just about the contract meaning but the contract language. That is, the parties do not just disagree about what parties intended the contract language to say, but disagree regarding the language in which the contract was written.[87] In similar cases, the parties' choice of a textualist interpretive rule will have only limited effect on court discretion.[88] And this holds even if the parties are free to opt for the strictest form of textualism: the so-called "simple textualism," under which the contract meaning can only be derived from "the impersonal

[84] Schwartz & Scott 2010, at 939.
[85] Schwartz & Scott 2010, at 964.
[86] Schwartz & Scott 2010, at 939.
[87] In general, one can distinguish between "majority talk," as the conventional language used by the largest majority of people within a community, including judges, lawyers, jurors, and "party talk" or "private talk," as the language used by minority communities, which may include just the parties to a contact or the parties to a trade and so on. *See id.* For a useful metaphor illustrating the difference between majority and private talks, see Ludwig Wittgenstein, PHILOSOPHICAL INVESTIGATIONS (G.E.M. Anscombe transl. 1958) ("Our language can be seen as an ancient city: a maze of little streets and squares, of old and new houses, and of houses with additions from various periods; and this surrounded by a multitude of new boroughs with straight regular streets and uniform houses.")
[88] A typical example of a language interpretive problem is when the parties use a term that has different meaning depending on the community language or dialect that is used. *See, e.g.,* in re Soper's Estate, 264 N.W. 427 (Minn. 1935) (where the problem was if the term "wife" indicated the woman to whom a mean was legally married or the woman with whom the man had long been living although he had never legally married her); *Frigaliment Importing Co v BNS International Sales Corp* 190 F. Supp. 116 (SDNY 1960) (where the problem was if the word "chicken" in poultry business dialect was meant to refer to any adult bird of the relevant species or only to young and tender birds suitable for broiling, but not to older birds good only for stewing). Another typical example of a language problem concerns cases of homonymy. *See, e.g., Raffles v Wichelhaus* (1864) 159 Eng Rep 375, Ct of Exchq. (concerning a shipping contract where there were two ships named Pearless and where the defendant meant one Pearless and the plaintiff another). In all of these cases, even strict textualism cannot resolve the contract's ambiguity, introducing some unavoidable contextualism.

linguistic meanings of its overt provisions."[89] Further, while textualist interpretation based on a hard parol evidence rule restricts the domain of admissible evidence, it cannot require the court to ,make particular applications of relevant doctrines. As a result, even in formalist jurisdictions like New York, the existence of residual court discretion may still lead parties to hold divergent beliefs on their expected litigation payoffs. [90] Otherwise, under our theory of interpretation and litigation, we should never observe litigation for interpretive problems in formalist jurisdictions, because parties would efficiently coordinate ex-post.[91]

Third, an efficient default textualist rule is not meant to constrain the parties' freedom to select the evidentiary base but rather would function as "a useful aid to contract design by offering parties the opportunity either to expand or to contract the context"[92] that the court will consider in solving interpretive disputes. While the exercise of this contractual freedom should promote accuracy in interpretation, it also would increase the scope of court discretion along the dimension of doctrinal application. As a result, optimal contract design only partially solves the coordination problem raised by the issue of court types.

Fourth, in new economy framework agreements, parties may be unable to write agreements that specify their contractual obligations in detail or, anyway, might not know which evidence will matter in the execution of the contract.[93] As we saw, these agreements are structured as framework arrangements—governing documents—that describe the cooperative behavior in which parties are supposed to engage in the presence of significant uncertainty with regard to what they will ultimately produce.[94] For example, a framework agreement will not require a party to execute a particular task optimally because the counterparty will often be unable to observe how the task was done, but the agreement can require the party to report a task result. (In addition, framework agreements seldom set prices at the inception of a transaction. Given their intrinsic imprecise nature, the obligational content of

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[89] Gideon Rosen, Textualism, Intentionalism, and the Law of the Contract 135, Book of the Language and the Law (2011)

[90] There is evidence of such residual court discretion in derogating from formalism even in formalist jurisdictions. For example, in *Hicks v. Bush* 180 N.E.2d 425 (N.Y. 1962), the contract provided for a merger of two corporations into a new corporation with the agreement that owners of the two corporations were to subscribe for stock in the new one within twenty-five days after the contract was signed. Otherwise, the contract was to be cancelled. One of the two corporations subscribed, but the other did not, and the deal fell through. In an action for specific performance, the defendant offered testimony that the written agreement was signed "upon a parol condition" that it "was not to operate" as a contract and that the contemplated merger was not "to become effective" until the party acquired funding in a certain amount. The trial judge admitted the testimony, and the plaintiff appealed. The New York Court of Appeals ruled that parol evidence is admissible to prove an "oral condition precedent to the legal effectiveness of a written agreement."

[91] See infra ---.

[92] Schwartz & Scott, 2010, at 963.

[93] As put by Gilson, Sobel and Scott, "under high uncertainty the parties themselves can neither set prospective rules to govern their conduct, nor even specify the relevant context by which conduct might be assessed. … In these circum-stances, parties are contracting over the creation of something whose features, and the contributions of each of the parties, are unknowable and will emerge only after many iterations between the contracting parties." See Gilson, Sobel and Scott, Text *and* Context: Contract Interpretation as Contract Design, 2014, at 63.

[94] Schwartz & Sepe 2021.

a framework agreement necessarily must be integrated ex-post with contextual information. As such, the interpretation of framework agreements always involves an element of judicial creation. Hence, for this class of contracts, a simple textualist interpretive regime is prevented by the nature of the parties' relationship rather than by the law.

In each of these four cases, contracting parties confront "unavoidable contextualism."[95] Thus, we ask how a court should choose interpretative rules when parties cannot contract out of contextual interpretation (though to a different extent depending on the specifics of the case) and there is uncertainty regarding both the contract's obligational content[96] and how a court will otherwise apply thelaw. The possible doctrines may include contract modification, excuse, implied contract terms, whether the contract is governed by common law or the Uniform Commercial Code, and so on. In these circumstances, the assessment of the trade-off parties face when confronted with interpretative issues becomes more complex and includes ex-post coordination problems that the parties may be unable to control either by choosing interpretive rules or by optimal contract design. As we shall see next, our proposal to introduce an action for interim interpretation responds to the inconsistent-beliefs cause of these coordination problems.

III. INTERIM INTERPRETATION AS A COORDINATION DEVICE

A. Interim Interpretation

To address the ex-post coordination problem arising out of informational asymmetry on court types, we suggest that current contract law rules on interpretation should be extended to include an action for interim interpretation. Parties should have the option to apply to a court *before* a breach occurs to obtain an anticipatory interpretation of their contract.[97] Interim interpretation would not give the parties enforceable rights, but commit the court to the same evidentiary base and the same application of contract doctrines in case of future litigation for contract breach.

From a game theory perspective, a court interpretation is equivalent to a truthful revelation of the court's type,[98] which eliminates the source of the parties' epistemic conflict and facilitates parties' coordination. As we saw, uncertainty around court types, and hence the scope of this conflict, varies with different cases of unavoidable contextualism. Uncertainty is minimal when the parties can opt for a textualist interpretive regime; it is reduced in case of optimal contract design that selects a mix of text and context. Uncertainty is maximized when a court is anti-

[95] Another way to put this is that the problem of court types will arise every time the parties are confronted with a mix of text and context to the extent that the court has some discretion over determining what that mix is. Cf. Gilson, Sabel and Scott, 2014, at 28 (suggesting that that the divide between the contrasting contractual prototypes considered by textualists and contextualists is too crude to capture the reality of current contracting practices).
[96] More concretely, we have in mind cases where even if the contract is legally complete (it specifies enforceable obligations), it is economically incomplete, as it either does not provide for a verifiable state-contingent plan of action or partitions future states of the world too coarsely
[97] Get bray cited.
[98] Note on truthful revelation.

formalist or the transaction involves a new economy framework agreement. The scope of interim interpretation should vary accordingly. When parties choose strict textualist interpretation, or an optimal mix of text and context, asymmetric information on the court type is mostly due to the court possessing discretion as to how to apply the relevant doctrines.. Indeed, formalist courts are (already) committed to a hard parol evidence rule under which the admissible evidence only includes the written agreement, or the mix of text and context the parties selected. Therefore, the court's interim interpretation essentially commits the court to specific doctrinal applications. In case of litigation for breach, the parties will anticipate that (i) the admissible evidence will be restricted to the original written agreement (which may possibly incorporate contextual information) *and* that (ii) the court will apply relevant doctrines as anticipated in the interim interpretation judgement.

In other cases of unavoidable contextualism (i.e., anti-formalist courts and new economy contracts), because the court also retains discretion on the admissible evidentiary base, the court interpretation commitment should extend to both the evidentiary base and the relevant doctrinal applications. That is, the court would commit to admit a certain mix of text and context, and certain applications of the relevant doctrines based on that mix of evidence. Should the parties end up litigating,[99] the court would then be held to a textualist interpretation of the "interpreted contract," where the new text integrates the mix of text and context the court committed to in its interim interpretation judgement. (To this extent, interim interpretation promotes a form of neo-textualism). Likewise, the court would be held to the same doctrinal applications anticipated in the interim interpretation judgement.

The different intensity of the coordination problem depending on the "level" of unavoidable contextualism also suggests that, as a matter of implementation, interim interpretation could take different forms. In less severe cases, such as when there is only residual uncertainty on a court's doctrinal applications, , interim interpretation could take the form of a declaratory judgment.[100]This remedy would allow the court to state its authoritative interpretation opinion regarding the applicable law. t

In general, textualist interpretation permits the resolution of many interpretation disputes by summary judgment.[101] While this remedy saves parties litigation costs by avoiding a trial, a summary judgement necessarily results in a severed relationship, hence wasting the parties' continuation value (and still

[99] Indeed, under the availability for interim interpretation, litigation for breach remains a possibility off-the equilibrium path.
[100] Cites.
[101] See, e.g., Kallman v. Radioshack Corp., 315 F.3d 731, 735 (7th Cir. 2002) ("[I]nterpretation of the terms of an unambiguous contract is traditionally a question of law and is particularly suited to disposition on summary judgment."); Thrower v. Anson, 752 N.W.2d 555, 56o-61 (Neb. 2008); Drake v. Hance, 673 S.E.2d 411, 413 (N.C. Ct. App. 2009); see also William C. Whitford, The Role of the Jury (and the Fact/Law Distinction) in the Interpretation of Written Contracts, 2001 WIS. L. REV. 931, 938 n.18 ("[M]ost courts find that if the written terms have a clear or plain meaning, summary judgment is appropriate, and jury consideration of the meaning of extrinsic evidence is not necessary.")

involving *some* litigation costs). Under a declaratory judgment for interim interpretation, instead, the parties would both preserve their continuation value and save litigation costs.

In some cases, parties are asymmetrically informed about both their own types and about the court's type. A declaratory judgement—which typically only involves an issue of law on undisputed or relatively undisputed facts[102]— is poorly suited for an interim interpretation in these cases. As an alternative, interim interpretation could take the form of a modified reformation remedy .

Courts today reform contracts when a party entered into a contract partly on the basis of a factual error; [103] reformation ensures that the contract reflects the deal both parties believed they were making. [104] Our proposed extension of reformation would thus call for lifting the constraint[105] that a parties' mistake must "relate to the facts existing at the time of making the contract. . . . A party's prediction . . . as to events to occur in the future, even if erroneous, is not the type of mistake that summons a court of equity into action."[106] This constraint is efficient for traditional contracts. Parties can write contracts that detail future states of the world, and how these states will affect the value of performance. Alo, parties allocate risk. The risk-allocation function of a traditional contract could only be preserved if a court refused to change a contract term (e.g., a price or a quantity) on the ground that the party seeking the change had made an erroneous prediction.

The rule that a court should not take exogenous ex post events into account when deciding whether to reform a contract is inapplicable to framework agreements, however., because these agreements do not allocate the risks of future events. Rather, parties partially *create* payoff relevant ex post states through their

[102] As a general rule, the judge resolves relevant ambiguities in a written contract unless the resolution depends on disputed parol evidence, in which case . See *e.g*., Smith v. Prudential Property and Cas. Ins. Co., 10 S.W.3d 846, 850–51 (Ark. 2000); Chuy v. Philadelphia Eagles Football Club, 595 F.2d 1265, 1271 (3d Cir. 1979)

[103] *See* STEVEN BURTON, ELEMENTS OF CONTRACT INTERPRETATION 102 ("To get reformation, the party seeking it must prove that, unknown to either party, their true agreement differed materially from the written agreement. Examples are typographical and transcription errors, or the parties' inattention to the writing.").

[104] *See id.* (explaining that the reformation exception to the parol evidence rule "is based mainly on the premise that the parties' intend to replace their subjective agreement with an accurate written contract.")

[105] This is especially so when one considers that "the burden of proof is high: '[T]o be entitled to reformation, a party must establish that the undisputed material facts fully, clearly, and decisively show a mutual mistake.' Second, reformation is an equitable doctrine. A court may withhold it as a matter of discretion, as when it thinks a party seeks reformation is a strategic pre-text. No jury is involved. Consequently, courts frequently apply the parol evidence rule despite the reformation exception." *See id.*

[106] 27 WILLISTON ON CONTRACTS § 70.3. As an example, a seller who mistakenly believed when it made the contract that demand for its product would be high cannot get a court to reform the contract to permit the seller to supply only the smaller quantity that would be profitable when demand turned out to be low.

actions.[107] Therefore, reforming a typical framework agreement on the basis of those actions would not frustrate the parties' purposes.

Before moving to how interim interpretation would work, we emphasize that reformation is commonly understood as a doctrine "other than" interpretation in the United States (one that remains relatively understudied). However, the literature on its predecessor in English contract law—"rectification"—tends instead to highlight that the two doctrines "operate on a spectrum."[108] That is, the differences between these doctrines would be more "a matter of degree than the kind."[109] More particularly, "[o]ne could move from interpretation of the express words, to correcting mistakes through construction of the text, to implication and then to rectification,"[110] so that the line between one doctrine and the other is difficult to draw.[111] This fluid view of interpretation and reformation-rectification then suggests that our proposal for a reformed reformation qua interim interpretation is less bold than it might prima facie may appear to American contract law scholars.

B. Coordination and Accuracy

Our continuing illustration helps to clarify the mechanism of interim interpretation and its normative properties in different contractual environments. To begin, suppose that state ω_2 is realized, in which it is efficient for the seller to deliver the more costly software w_2. Also suppose that, during the execution of the contract, the parties have discussed the buyer's new operating system and have orally agreed that the seller would adapt the older software to the new system. The contract, however, did not condition the seller's choice to deliver w_1 or w_2 on the realized state of the world. Let us also assume that the contract is silent on subsequent modifications and that the governing law is California,.[112] Finally, assume the seller communicates to the buyer its intention to produce w_1 (i.e., the older, less costly software). In this case, the buyer will sue whenever her belief on court interpretation will be such that her expected litigation payoff (i.e., the expectation damages she will receive) is higher than her continuation value. The seller will be willing to go to trial whenever his belief on court interpretation, which will be different from the buyer's belief, is such that his expected litigation payoff (i.e., the expectation damages he would have to pay) is less costly than staying in the contract and producing the more expensive widget. , Note that litigation is inefficient because ithe parties would forego the surplus that would be created if the parties agreed to trade that widget.

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[107] Gilson, Sabel and Scott observe: "Context is endogenous: the contract process is designed to create context rather than respond to it." Gilson, Sabel & Scott, *Text and Context*, *supra* note ---, at 44.
[108] MITCHELL, INTERPRETATION OF CONTRACTS 104-5..
[109] *Id.*
[110] *Id.*
[111] Hooley.
[112] Note that implications of this illustration do not change if one assumes that the parties have instead chosen a formalist jurisdiction. As we saw, textualism only reduces but never eliminates the room for court discretion in interpretation.

Consider instead the outcome when the interim interpretation remedy is available. The buyer then could ask the court to adjudicate the parties' interpretative dispute about which performance is due in state ω_2 *before a breach occurs*. Assume the court here is a Type θ_3 court, which can perfectly observe, and accurately give precedence to, the context.[113] In this case, then, the court will inform the parties that it is committed to admit contextual evidence and hold that the parties' ex-post communication and oral agreement create a separate enforceable contract entitling the buyer to the new software, but at a higher price. Under this interpreted contract, the buyer would have a credible threat to induce the seller to renegotiate the contract. Indeed, the seller would no longer be willing to go to trial, as he would share the same belief on court interpretation as the buyer (i.e., that the buyer has a legitimate claim to w_2) and anticipate that litigation would only raise litigation costs and cause him to waste the relationship's continuation value. As a result, the parties would perform the value-maximizing interpreted contract.

This illustration is straightforward because it assumes that the court's interim interpretation can accurately identify value-maximizing terms of exchange. Still, it is useful to show that when incorporating contextual information is essential to maximize the value of the parties' relationship, interim interpretation helps preserve accuracy while avoiding the coordination problems that unavoidable contextualism could produce. . To this extent, interim interpretation enables courts efficiently to adapt the parties' contract to changing circumstances, preserving the value of incorporating contextual information while preventing a breach.[114]

There are more difficult cases when the court's interim interpretation does *not* identify value-maximizing terms of exchange. As we explain in section C, this possibility does *not* jeopardize the normative desirability of interim interpretation, but it weighs differently in an exchange vs. an investment economy. Next, in section D, we explicate the different implications of interim interpretation in traditional economy vs. new economy contracts. In either set of contracts, interim interpretation helps incorporate contextual information. But, as we will see, it does matter whether the context a court needs to consider is pre-existing, as in traditional economy contracts, or ongoing, as in new economy contracts where the parties partly create context as they go along and when parties also tend to be asymmetrically informed on their own types.

C. Coordination vs. Accuracy

As with interpretation after breach, a court's interim interpretation might fail to identify value-maximizing terms of exchange for several reasons. For instance, information could not be verifiable to the court or the court could not be able to assess the optimality of the behavior it sees.[115] Thus, in our manufacturing example, the court could be unable to verify the exact content of the parties' oral agreement, or not fully understand that producing the new software results in an

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[113] See supra text accompanying notes ---.
[114] At the same time, interim interpretation would not involve higher writing and adjudication costs than litigation for breach; in fact, to the extent that interim interpretation would not involve a jury trial, it would lover those costs overall.
[115] Cites.

efficiency gain, or be unable to verify the seller's increased costs of production. In these cases, the court's interim interpretation may be inaccurate. As we show below, the potential inaccuracy of interim interpretation matters to a different extent in an exchange vs. an investment economy but it does not jeopardize the normative desirability of the remedy.

1. Exchange Economy

In an exchange economy, where parties trade non-specialized goods and trading takes place in developed markets, parties expect that they will trade either with their contract partner or a similar firm. Because a deal is certain, parties always invest efficiently to maximize deal value. Under this assumption, when the interpreted contract does not maximize deal value because the court interpretation is inaccurate, the parties will renegotiate of the interpreted contract. To better see this, consider again our illustration and assume that state ω_2 is realized, but the court is of Type θ_2, i.e., a court that only imperfectly observes the context and that gives precedence to the text when the buyer and the seller agree that a delivery is due (i.e., in states ω_1 and ω_2). This type of court, as we saw above,[116] will exclude contextual evidence to address the question of which performance is due. Hence, the court will allow the seller to exercise his discretion to deliver the less costly widget w_1 even when the buyer has developed a new operating system (ω_2) and the parties have exchanged communications about this circumstance and orally agreed that the seller would produce w_2. However, as long as *both* parties expect the court to hold that the buyer does not have a legitimate claim to w_2, the inaccuracy of the court's holding would not affect efficiency. The parties could coordinate on this shared belief and thus efficiently renegotiate the interpreted contract[117] (i.e., the buyer will presumably offer the seller a higher price to produce the new software, leaving him part of the renegotiation surplus).

Similarly, when the realized state is ω_0 (the increase in seller's manufacturing costs due to the Covid19 pandemic) and it is efficient for the seller to deliver w_0 -- nothing -- the buyer could demand the delivery of w_1 and litigate if the seller refuses, when the buyer expects the court to be of Type θ_1. The buyer expects a Type θ_1 court to imperfectly observe the context and therefore not apply excuse doctrines to free the seller. In contrast, under interim interpretation the seller could ask the court to resolve the issue of whether performance is due in state ω_0. Once the court has announced its type, the parties will either accept the interpreted contract, if the court interpretation is accurate (i.e., the court is of Type θ_2 or Type θ_3), or efficiently renegotiate it if the court interpretation is not accurate (i.e., the court is of Type θ_1) and there are gains from trade.

In an exchange economy, therefore solving the coordination problem has priority over accuracy. This is because once the parties' epistemic conflict on court interpretation and expected litigation payoffs is solved, parties will adjust to the

[116] See supra text accompanying notes ---.

[117] Put differently, uncertainty on court interpretation can be seen as a transaction cost; hence, its elimination facilitates the application of the Coase theorem.

right result, whether the court's interim interpretation is accurate or not. Two important normative implications follow from this conclusion.

First, when solving the coordination problem takes priority over accuracy, a textualist rule is preferable. This is not just because, as highlighted by classic formalist analysis, the parties know better their types and hence are in a better position to solve the tradeoff between accuracy and writing and adjudication costs. It is also because any loss in accuracy that a textualist rule may involve is outweighed by the gains this rule allows the parties to realize by reducing the coordination problem.[118] That is, even assuming that a court may deliver a less accurate interpretation of the parties contract under a textualist rule, this will not jeopardize ex-post efficiency as long as the parties are able to coordinate their actions by engaging in Coaesian bargaining.[119]

Second, and regardless of whether the court will deliver an accurate interpretation (if the parties are in an exchange economy), interim interpretation induces parties to reveal their second-order beliefs on court interpretation. Thus far, we have shown that interim interpretation permits parties to realize their renegotiation gains. This conclusion, however, does not take into account the incentive for parties sometimes not to report their second-order beliefs on court interpretation truthfully. For example, a party (she) might exaggerate her second-order belief to make the counterparty believe that she has a better litigation option and gain a bargaining advantage. This possibility may cause renegotiation to fail, even when the parties actually have consistent (or similar) second-order beliefs.

For example, assume again that the realized state is ω_2 and that parties' second-order beliefs on the court interpretation are the same: $(1-p_2)=(1-q_2)$ (for example because the parties have opted for a default textualist rule under which uncertainty on the court's type is reduced). Hence, if the parties reported their beliefs truthfully, they would renegotiate the contract and litigation would not occur in equilibrium.[120] However, the parties might strategically misreport their second-order beliefs. The buyer might find it profitable to overreport $(1-p_2)$ (i.e., that the court will find that she has a legitimate claim to w_2) in order to gain a higher payoff in the renegotiation stage (i.e., induce the seller to produce w_2 at a lower price). Likewise, the seller might have incentives to overreport $(1-q_2)$ (i.e., that the court will *not* find the buyer to have a legitimate claim to w_2) so to induce the buyer to accept a higher price for w_2.

Without a mechanism that induces the parties to truthfully reveal their second-order beliefs, at the equilibrium renegotiation might fail although the

[118] In these circumstances, the gain from interim interpretation relative to textualism are just distributive, but, as we saw, parties may not be able to opt for textualism in interpretation.

[119] In an exchange economy where coordination takes priority over accuracy, the availability of interim interpretation may have distributive effects (if the court interpretation can move the parties' default bargaining point closer to efficiency), but would not lead to a Pareto improvement relative to a textualist default rule. As we shall see below, however, this no longer applies when parties transact in an investment economy, in which the availability of interim interpretation always increases efficiency relative to just having a default textualist rule.

[120] The buyer will want to sue the seller as long as $(1-p_2)(v_2-v_1)>V_B$, but the seller will want to avoid litigation because $\min[(c_{22}-c_{21}), (1-p_2)(v_{22}-v_{21})]-V_S<(1-q2)(v22-v21)$ always holds for $(1-p2)=(1-q2)$ (even when there is no continuation value for the seller).

parties' true beliefs on court interpretation are consistent. However, when either party can request an interim interpretation, there no longer is room for untruthful reporting: the parties will gain common knowledge of the court type. On this common knowledge, the parties anticipate that they will either execute the interpreted contract or renegotiate it if the contract is inapt in the realized state. In either case, parties will no longer have ex-ante incentives strategically to misreport their second-order beliefs. Therefore, at the equilibrium, the threat of interim interpretation will induce the parties to reveal their second-order beliefs truthfully, thereby facilitating renegotiation.

2. *Investment Economy*

In an investment economy, sellers produce specialized goods for buyers. Hence, the value of a sale partly depends on the parties' investments in the transaction. Importantly, parties usually invest before uncertainty on the state of the world resolves. For an example, let the seller in our illustration produce software only by making a sunk-cost investment—that is, by configuring her facilities so that they cannot easily be altered to produce goods for other buyers. Or suppose that the seller's software could only be resold for a fraction of its cost if the buyer rejects. Coupled with the unverifiability problem—courts cannot observe or evaluate the relevant behavior (e.g., the seller's sunk investment)—these features of the parties' deal might lead to underinvestment if a party (e.g., the seller) anticipates that the other party (e.g., the buyer) will attempt to renegotiate the deal to her benefit ex-post. This is the well-known hold-up problem, where unverifiability permits moral hazard.[121] The economic literature has produced several schemes to solve the problem of inducing agents subject to moral hazard to make optimal relation-specific investments. These schemes, however, are seldom observed in practice, in part because, as we argued elsewhere,[122] institutional constraints preclude them.[123] The question we take up is whether interim interpretation can ameliorate the parties' hold-up problem.

We answer that if courts do not make systematic interpretative mistakes, interim interpretation can provide a useful aid to contract design. It offers parties an opportunity to reduce ex-post state-contingent contractual inefficiency, which in turn would mitigate the risk of underinvestment.[124] The intuition is straightforward. The action for interim interpretation, when anticipated by the parties, allows the parties to coordinate their investment behavior along the equilibrium path. As a result, parties are less exposed to the risk of ex-post moral hazard. Indeed, if courts

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[121] Cites.

[122] Schwartz & Sepe, 2021.

[123] For example, many of these schemes share a renegotiation-proofness requirement, under which parties need sometimes to commit to ex-post inefficiency to promote ex-ante efficiency (i.e., optimal investments). The law of contract modification, however, restricts the parties' ability to create efficient commitment devices by enforcing only oral no-modification clauses and, more generally, by creating rules that facilitate renegotiation. *See id.*

[124] The value of this aid increases in cases where a renegotiation-proof scheme might not be desirable, regardless of institutional constraints. This will be the case, for example, when the sacrifice of ex-post efficiency may violate the parties' participation constraint, as with new economy contracts that are inherently characterized by high ex-post uncertainty.

are accurate on average in recovering context (i.e., interpret the parties' signals on the context with some accuracy), a party whose role is to make a sunk investment will expect its counterparty to prefer renegotiation less often (or to a smaller extent) under the "reformed contract" (i.e., the interpreted contract),[125] because that contract is more likely to be state-contingent efficient. Put differently, because the reformed contract should be closer to the first best relative to the original contract, a counterparty has less to gain from renegotiation. This shrinks the payoff to ex-post moral hazard. As a result, the party that incurs sunk costs will reduce underinvestment at the equilibrium

Comparing the parties' positions under textualism with interim interpretation helps illustrate more precisely how interim interpretation may mitigate the hold-up problem. The comparison also shows that in an investment economy where courts do not systematically misinterpret contextual information, interim interpretation leads to a Pareto improvement relative to a textualist default rue.

a. Interim Interpretation and Specific Investments

The buyer now agrees to invest I (e.g., configure her operating system so that the system is more productive in the deal but cannot easily run with software produced by other sellers). The investment also is valuable only when the parties implement the efficient trade, i.e., the trade that matches the realized state of the world, but is valueless otherwise.[126] We also assume that the specific investment increases the buyer's valuation but at a decreasing rate.[127] The three illustrative states of the world are equiprobable.[128] The optimal level of specific investments, I_{eff}, should consider only the two states when trade would be efficient.[129]

We first consider textual interpretation. The buyer will maximize (i) her state contingent utility based on the contract text in conjunction with (ii) the renegotiation surplus the buyer expects to receive -- i.e., ½ -- when the text is state-contingent inefficient. Because the buyer is aware of this possibility, and because textualism rules out context, , the buyer expects to renegotiate with positive probability. This in turn implies that to implement the efficient trade, the buyer requires the seller's consent; hence, the buyer must share renegotiation surplus with the seller. As a result, the buyer *strategically* underinvest: $I_{text} < I_{eff}$.[130]

[125] Interim interpretation here should take the legal form of reformation, because the court's interpretation commitment would not just entail a doctrinal application, but the extent and kind of contextual information the court will admit in "reforming" the contract ex-post.

[126] That is $v_{ij}'(I)>0$, only when i=j and $v_{ij}'(I)=0$, when i≠j.
[127] That is $v_{ij}(I)$, with i=j, is concave in I.
[128] Formally, this program can be written as $1/3(v_{11}(I)-c_{11})+1/3(v_{22}(I)-c_{22})-I$.
[129] The FOC with respect to I, $v_{11}'(I)+v_{22}'(I)=3$, determines the efficient investment level, *Ieff*.
[130] Analytically, the buyer maximizes the following program: $1/3v_{11}(I)+1/3\{v_{21}-(c_{22}-c_{21})+[(v_{22}(I)-c_{22})-(v_{21}-c_{21})]/2\}+1/3v_{01}-I$, with respect to I, where (c_{22}-c21) is the increased production cost the buyer pays to the seller and [(v22(I)-c22)-(v21-c21)]/2 is the renegotiation surplus going to the buyer in state ω2. Note that if the remedy were specific performance, in state ω_0, the buyer could have been able (presumably) to obtain half of the renegotiation surplus $[(c_{01}-v_{01}]/2$. The equilibrium underinvestment $I_{text} < I_{eff}$ is obtained by the FOC of the previous program; that is $v_{11}'(I)+1/2v_{22}'(I)=3$ and the concavity of v_{ij}.

Figure 1 below conveys this conclusion at a more intuitive level:

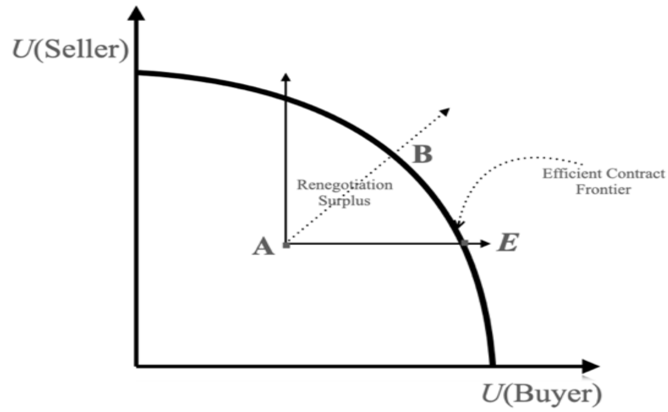

Figure 1: Renegotiation without Interim Interpretation

When the contract is economically incomplete (i.e., it fails to condition party actions on the ex-post states), the parties will be at point A, which is state-contingent inefficient (i.e., this point is below the efficient contract frontier).[131] Point A defines the default position of the parties. The renegotiation surplus is bounded by the two arrows originating at point A. Note that any point to the left of the vertical arrow is not feasible because the buyer is better off at point A. Similarly, any point below the horizontal arrow is not feasible as the seller would be better off at A. If the parties could refer to the context to identify their contract rights, however, they would make the contract that point E represents. This contract, for example, would ensure production of w_2 upon the realization of ω_2. The seller would deliver the better software at a higher price, even if under the contract's text he could deliver any software. Because the parties have equal bargaining power, they will expect to renegotiate the contract from point E to point B on the efficient contract frontier—a move that requires the buyer to leave renegotiation surplus (represented by the distance between A and B) to the seller (this is the Nash-bargaining solution).[132] But anticipating that she will end up at point B, the buyer strategically underinvests at the level of $I_{text} < I_{eff}$, which is proportional to the size of the expected renegotiation surplus.

Under an action for interim interpretation, instead, the buyer anticipates that if the contract is state-contingent inefficient ex-post, she could ask the court to reform the contract midstream. If the court is not systemically mistaken in interpreting the relevant contextual information, the reformed contract will move the buyer's default bargaining point closer to the optimal allocation (i.e., to the exchange the parties would have agreed on if they did not have pragmatic reasons to disagree).[133] This reduces the gain from renegotiation and therefore the room for ex-post moral hazard.

[131] Note that all the points on the efficient contract frontier are efficient, although they capture different distributions of the surplus.
[132] Add note on Nash bargaining.
[133] See supra text accompanying notes ---.

To see this, let the buyer believe that the the court correctly reforms the contract (i.e., it will be interpreted to identify an efficient trade) with a positive probability λ.[134] In our illustration, an inaccurate interpretation is equivalent to requiring the parties to execute the inefficient exchange that is specified in the contract.[135] At this point, however, the buyer (resp: the seller) knows that she is legally entitled to an efficient trade not only in state ω1 (i.e., when the contract is self-enforcing) but also in state ω_2 (resp: ω_0), as long as the court accurately interprets contextual information (an event occurring with probability λ). Thus, renegotiation would occur when the states are either $\omega_{\cancel{2}}$ or $\omega_{\cancel{0}}$ and the court inaccurately interprets contextual information (an event occurring with probability $1-\lambda$). Thus, the buyer anticipates that she will renegotiate only when the court errs in reforming the contract.[136] In turn, this reduces the buyer's strategic underinvestment, to the level I_{ref}, which is now a function of the court's ability to interpret context.[137]

In sum, an analysis of a textualist rule in conjunction with interim interpretation, as reformed reformation, yields the following results:

(i) When the court's interim interpretation is inaccurate (i.e., $\lambda=0$), this is equivalent to the case where the court reads the contract textually (as we have assumed that the text is state-contingent inefficient in states ω_2 and ω_0). The equilibrium investment is then equal to that induced under textual interpretation: $I_{ref}=I_{text} < I_{eff}$.

(ii) When the court's perfectly reads contextual information (i.e., $\lambda=1$), the equilibrium investment level under reformation is equivalent to the efficient level: $I_{ref}=I_{eff}$.

(iii) In the interval (0,1) of λ—that is, under the most realistic assumption—underinvestment is reduced under interim interpretation relative to textual interpretation: $I_{text}< I_{ref}< I_{eff}$.

We again use a figure, Figure 2, to better illustrate this conclusion.

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[134] Note that in state ω_2, λ corresponds to $1-p_2$ of the previous section D.

[135] Our illustration is a stylized representation of the problem. Of course e, the court can reform the contract *in peius*, meaning that the reformed contract is further r from the efficient allocation relative to the original contract. We ignore this case here this additional complexity.

[136] Again, this statement comes from the stylized facts of our illustration. In the actuality, a court can reform a contract by describing trades which are dominated by those described in the original contract. However, our qualitative argument holds to the extent we reasonably believe that courts do not make systematic mistakes.

[137] Under interim interpretation, the buyer optimizes the following program: $1/3v_{11}(I)+1/3\{\lambda(v_{22}(I)+(1-\lambda)[v_{21}-(c_{22}-c_{21})+[(v_{22}(I)-c_{22})-(v_{21}-c_{21})]/2]\}+1/3\{\lambda K+(1-\lambda)[v_{01}]\}-I$ with respect to I. This maximization program delivers the following FOC: $v_{11}'(I)+[\lambda+((1-\lambda)/2)]v_{22}'(I)=3$. And by the concavity of the buyer's evaluation function, it is immediate to see that $I_{text}< I_{ref}$ for $\lambda >0$.

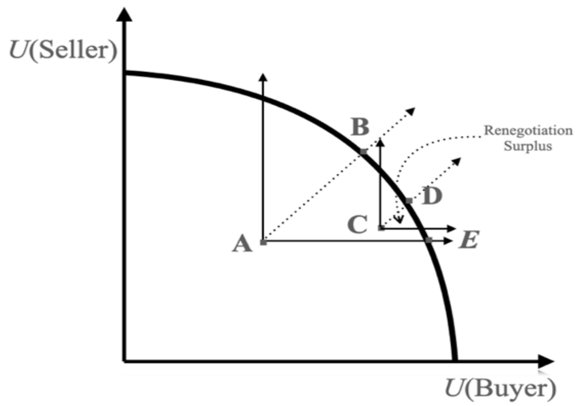

Figure 2: Renegotiation with Interim Interpretation

As in Fig. 1, A is the parties' initial default position (based on the contract text only), E is the efficient contract position (which incorporates context) and B is the parties' renegotiation position, under which the buyer need to share renegotiation surplus with the seller. Now, however, we admit that the parties (i.e., the buyer) can ask the court to interpret the contract midstream. The court's interpreted contract is identified by point C, which incorporates some context and becomes the parties' new default position. Note that C is still below the efficient contract frontier but is closer to the frontier and point E than point A. As C is the new default contract, the contract's renegotiation surplus will now be bound by the two arrows starting at C. As with point A, this means that a point at the left of the vertical arrow is not feasible as the buyer would be better off at point C, while a point below the horizontal arrow is not feasible as the seller would be better off at C.

Similar to above, under the assumption that the parties have the same bargaining power, they will then renegotiate the interpreted contract, if the contract is not efficient. When the default position is C, however, the parties will no longer end up at B but at D (which is the new Nash bargaining solution), where the distance between C and D captures the "room" for the new renegotiation surplus. This room is considerably smaller than that in Fig. 1 where the default position was at A and the renegotiation position was at B. As a result, a risk neutral buyer who expects the court to interpret the contract without making systematic mistakes will reduce her level of underinvestment accordingly. Put differently, the level of the buyer's underinvestment will be reduced proportionally to the buyer's belief that the interpreted contract (i.e., contract C) will be closer to contract E than the parties' default contract without interim interpretation (i.e., contract A). The closer the interpreted contract is to E, the lower the buyer's underinvestment. However, the interpreted contract does not *need* to be *at* E; instead, what matters is the improvement relative to what the default position under the letter of a state contingent-inefficient contract would be (i.e., contract A).

<u>b. Average Court Accuracy</u>

Is the assumption that the court is correct on average reasonable? We answer yes for two reasons. First, in an investment economy, the parties' relationship typically evolves over time. At t^0, the parties contract and at t^2 the seller performs. If nothing happens between t^0 and t^2, as usually is the case for simple exchange contracts, the parties will always be in a superior epistemic position vis-à-vis the court. But to the extent that the transactional environment is richer and new relevant information materializes at t^1 (i.e., in the execution of the contract), in interpreting the contract the court will likely be better informed than the parties at t^0 (although less than the parties at t^2).[138] That is, to the extent that the court can observe the parties' ex-post behavior in the execution of the contract, the court, on average, will be able interpret the contract to make the contract more state-contingent efficient. Second, parties have an incentive, when writing the contract, to facilitate the ability of a court to discern their intentions. These conclusions is strengthened when parties have access to expert courts, such as the Delaware Chancery Court, because expertise adds value-relevant knowledge that makes courts better at evaluating the parties' information.[139]

The explanation above, however, does not solve the problem of unverifiable information. If contextual information is unverifiable, the court might not do better than the parties at t^2, especially because parties might strategically misreport their beliefs. Here, we suggest that the availability of an action for interim interpretation could facilitate the implementation of some mechanisms identified by the theory of incentives to solve the problem of ex-post unverifiability.[140] Under interim interpretation, the judicial role extends to constructive participation during the parties' transaction rather than being limited to picking up the pieces later. This is consistent with mechanism design protocols which attempt to induce parties to reveal private information. These protocols typically supposes a role for the court as part of the parties' transaction itself—the game, in the jargon of economists. Therefore, while current institutional constraints largely exclude that courts can play such a role, interim interpretation could open new possibilities to implement efficient mechanism design protocols.

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[138] It is realistic to assume that court can better observe at t^2 what the parties observed at t^1 although the parties at t^2 would be better than the court. Put differently: (a) parties at t^1 are limited in what they can do because of informational constraints; (b) the court at t^2 can improve allocation; (c) parties at t^2 can improve court allocation at t^2, where (c) captures the effect of Coasean bargaining after interim interpretation.

[139] *Cf.* Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation Through Rules, Norms, and Institutions*, 99 Mich. L. Rev. 1724, 1735 (2001); Lisa Bernstein, *Merchant Law in a Merchant Court: Rethinking the Code's Search for Immanent Business Norms*, 144 U. Pa. L. Rev. 765, 1769–70 (1996) (arguing that commercial arbitrators, who are expert by definition, choose literalism frequently, more than courts, which is consistent with our defense of textualism and, indirectly, with our claim that combining expertise with an interim interpretation rule would further add to efficiency). Also add quote from Bratton-Sepe 2020 (on the importance of having a Court like Delaware where facts are not determined by the jury but by the judge (the chancellor)).

[140] For example, Eric Maskin showed that it is possible to design a mechanism that induces the parties truthfully and publicly to verify the observed state of the world by fining them if they disagree on what the realized state is. See Eric Maskin, Nash Equilibrium and Welfare Optimality, 66 REV. ECON. STUD. 23 (1999) (paper first presented at the summer workshop of the Econometric Society in Paris, June 1977). John Moore and Rafael Repullo also showed that when some dynamic is introduced in the game, revelation is truthful and implementation is unique (unlike in Maskin), if fines can be imposed on the parties. See John Moore & Rafael Repullo, Subgame Perfect Implementation, 56 ECONOMETRICA 1191 (1988).

IV. INTERIM INTERPRETATION AS A MEDIATION DEVICE

Parties make exploratory specific investments in order to see whether a collaboration is possible.[141] These investments often take place before parties can write an enforceable contract.[142] Thus, the risk of holdup is endemic to the new collaborations. However, as we outlined in Part I.B.2 and will discuss in detail below, two additional complexities attend collaborative economy contracts compared to investment economy contracts (and more generally traditional economy contracts): the lack of prior context and the parties' asymmetric information. The purpose of this section is to show that these problems cannot be solved independently of the fundamental theoretical problem we explore: asymmetric information about court types. For the court type problem is exacerbated by these additional complexities.

A. Context and Parties' Asymmetric Information in New Economy Contracts

The context necessary for interpretation is not preexisting in new economy contracts. Rather, parties partly create context as their relationship progresses. Indeed, framework arrangements implement a modern version of relational contracting.[143] The arrangements are relational because they facilitate repeated cooperation between parties rather than use authority to resolve uncertainty.[144]

In addition, , given the uncertainty characterizing the new collaborations, parties often are asymmetrically informed about their types. In particular, the development of complex and innovative new products and/or services and the creation and exchange of proprietary information are key feature of collaborative contracts. Hence, the source of the parties' informational asymmetry typically concerns technology. By technology, mean how parties combine resource inputs to produce outputs.[145]

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[141] Schwartz – Sepe, 2021.
[142] Schwartz – Sepe, 2021.
[143] *See* David Frydlinger, Oliver Hart & Kate Vitasek, *An Innovative Way to Prevent Adversarial Supplier Relationships*, HARV. BUS. REV. (Oct. 8, 2020), https://hbr.org/2020/10/an-innovative-way-to-prevent-adversarial-supplier-relationships [hereinafter Frydlinger, Hart & Vitasek, *An Innovative Way*]; David Frydlinger, Oliver Hart &Kate Vitasek, *A New Approach to Contracts*, HARV. BUS. REV (Sept.-Oct. 2019) https://hbr.org/2019/09/a-new-approach-to-contracts [hereinafter Frydlinger, Hart & Vitasek, *A New Approach*]; Naomi R. Lamoreaux et al., *Beyond Markets and Hierarchies: Toward a New Synthesis of American Business History*, 108 AM. HIST. REV. 404, 408-09 (2003); John M. de Figuereido & Brian S. Silverman, *On the Genesis of Interfirm Relational Contracts*, 2 STRATEGY SCI. 234 (2017). For a general discussion of relational contracts from a theoretical economic perspective, *see also* George Baker et al., *Relational Contracts and the Theory of the Firm*, 117 Q.J. ECON. 39, 39 (2002); Jonathan Levin, *Relational Incentive Contracts*, 93 AM. ECON. REV. 835 (2003). In these studies, the authors analyze self-enforcing agreements between sophisticated parties where reputational mechanisms suffice to solve most contracting problems.
[144] For seminal early works on relational contracting, see, for instance, Stewart Macaulay, *Non-Contractual Relations in Business: A Preliminary Study*, 28 AM. SOC. REV. 1 (1963); Ian R. Macneil, *Whither Contracts?*, 21 J. LEGAL EDUC. 403 (1969); and Ian R. Macneil, *Contracts: Adjustment of Long-Term Economic Relations Under Classical, Neoclassical, and Relational Contract Law*, 72 NW. U. L. REV. 854, 886-900 (1978).
[145] Mas-Colell cited.

As we explain elsewhere, this kind of asymmetric information is the main reason potentially valuable collaborations sometimes do not form and actual collaborations often fail.[146] Most importantly for the discussion developed in this Article, the problem of party types exacerbates the problem of the court's type. In traditional economy contracts, the parties' inconsistent beliefs on court interpretation are the source of failed renegotiation. Heterogeneity in the parties' beliefs depend on the court's private information and idiosyncratic factors (i.e., pragmatic reasons) that are specific to each party (including their previous litigation experience, possibly different (intangible) information about a court's interpretative behavior, and so on).[147] Given the combination of these factors across the parties, their beliefs on court interpretation may diverge less or more, making renegotiation, correspondingly, more or less likely. In collaborative contracts, however, the parties will *always* have divergent beliefs on the court type. This is because if the parties themselves cannot agree on the contract's obligational content due to divergent first-order beliefs on the relevant transactional facts, they will necessarily disagree on how the court will interpret the contract.[148]

B. Interim Interpretation and Information Revelation

Under the joint problem of party types and court type, the court's task in interim interpretation is no longer reducible to recovering the context against which the parties created their contract, , as with traditional economy contracts. Instead, the court's task is to facilitate a possible path forward by inducing the parties to reveal private information on their types. As we outlined above,[149] revelation may occur either through a process of forced disclosure of information, which the court can then pass along to the parties in disclosing its type. Alternatively, when information is not verifiable, interim interpretation may involve a mediation process under which the court proposes to the parties a forwardooking assessment of their arrangement, thereby removing uncertainty about the parties' rights and facilitating the voluntary disclosure of information.

Both these solutions, however, are necessary because of a court type problem. If parties were perfectly informed about their rights, they could self-determine the structure of incentives inducing the revelation of their private information, without the "cooperation" of the court. But when parties are asymmetrically informed about the relevant facts of their transaction, the court type becomes a more radical problem. In the standard court type problem, parties have inconsistent beliefs about their rights because they do not know how a court will apply the relevant rules. Here, the court type problem is exacerbated because parties that are asymmetrically informed about their types (i.e., about the facts concerning

[146] Schwartz-Sepe 2021.
[147] *See supra* text accompanying notes ---.
[148] Mertens, Jean-François; Zamir, Shmuel (1985). "Formulation of Bayesian analysis for games with incomplete information" in International Journal of Game Theory (where they constructed a universal space of types in which, subject to specified consistency conditions, each type corresponds to the infinite hierarchy of his probabilistic beliefs about others' probabilistic beliefs.) Under this representation it is not possible that one type does not know the other type but two types agree on how a third type will consider them.
[149] See supra Part I.

their exchange) cannot hold consistent beliefs about their transactional rights because rights are fact dependent. As court interpretation saliently depends on facts, parties' asymmetric information on court type becomes a more severe problem in the new economy contracts.

To better illustrate these distinguishing features of interim interpretation in collaborative contracts, we expand the illustration we introduced in Part I.

As in our prior illustrations, we consider a project for the development of software. However, given the innovative nature of the parties' collaboration, the seller must produce novel software, whose precise technical details are unknown when the parties enter into the framework agreement at $t^{0.}$ These details depend on several factors, including the setup for the buyer and the specific functions the software is supposed to perform. There are several possible setups, x_0, x_1,…, x_I for the buyer. At t^0, the buyer thus believes there is software that would be compatible with her other software and would be profitable at particular prices and given particular demand for the buyer's products. We call each version of software a prototype. As is apparent, prototypes are multi-attribute: cost, capacity, speed, safety and, importantly, fit with the buyer's technology for each element of the possible setups. The buyer can credibly (and self-interestedly) communicate to the seller a subset of information for each possible setup. However, the seller at t^0 can learn only few attributes for each setup, which captures the informational asymmetry problem about the buyer's type. For example, suppose that each setup has n attributes, but the seller can only learn $m<n$ attributes.[150] These would include a subset of the attribute information, something about the buyer's business plans and possibly other information. This also means that n-m=Δ attributes is the private information of the buyer.

Similarly, at t^0, the seller believes it would be technically feasible to produce a software that could perform various useful functions for manufacturers in the buyer's industry. The cost of a software type is determined by the functions the software is created to perform. There is an array of possible software each with some specific functions f_0, f_1, …, f_J that the seller can develop for the buyer. As in the case of the buyer, the seller can credibly (and self-interestedly) communicate a subset of information about the functions of each software. Assume that the pieces of information concerning each software functions is y.[151] However, at t^0, the buyer can only learn $z<y$ pieces of relevant information. For example, z includes the types of functions of past software the seller has produced, input factors, production times, but may not include the seller's labor or supplier costs. This also means that y-z=Γ is the private information of the seller.

Although, the sets of the buyer's setups and the seller's software functions are common knowledge, there is a strictly positive size of asymmetric information for the parties (i.e., Δ and Γ for the seller and the buyer, respectively). The parties

[150] Technically, buyer's information takes the form a matrix with I+1 columns and n rows, where the columns are the number of possible setups and the rows are the numbers of attributes of the setups.

[151] Similarly, the seller's information takes the form a matrix with J+1 columns and y rows, where the columns are the number of the possible set of functions for each kind of software and y is the number of specific functions for each kind of software.

are willing to commence the project if there is at least one kind of software whose functions match the setup of the buyer.[152]

The implementation stage begins at t^1. Before then, both parties do research, make initial investments in possible performance and communicate to each other. This means the size of the parties' private information shrinks between t^0 and t^1. However, the parties can have a full sense about the value of their collaboration only when they have full information of the attributes of the buyer's setups and the seller's software functions.[153] We thus consider three possibilities, corresponding to the three states of the world we discussed in prior illustrations.[154] Each specific state of the world corresponds to a situation where the parties' private information reveals to a different extent and induces different matches.[155] In considering these cases, for simplicity, we also assume that Γ=0, meaning that the seller has completely and credibly revealed its private information to the buyer.[156] The first two cases corresponds to Δ=0 and collaboration is valuable,[157] and Δ=0 but collaboration is not valuable.[158] Under the first case, parties would exchange, without the need for court intervention.[159] Similarly, in the second, they would voluntary rescind the contract.[160] Thus, the relevant state of affairs for our illustration is when Δ>0 and the parties have divergent beliefs on the collaboration

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[152] That is software $w_0, w_1, \ldots, w_J$ whose functions $f_0, f_1, \ldots, f_J$ matches the setup of the buyer $x_0, x_1, \ldots, x_I$.

[153] It may seem natural to assume that the sets of setups and the software functions shrink as a result, but this is not necessarily the case. For example, the seller may realize it can produce a multi-purpose software that could satisfy buyers with operating systems that differ from the buyers' own system, thereby introducing an opportunity cost into the seller's production function.

[154] *See supra* text accompanying notes ---.

[155] While in the base illustration the three states of the world, ω0, ω1, and ω2, represented a form of exogenous uncertainty, here the states of the world are determined by the voluntary or forced revelation of the parties' private information, where each induces different matches. In this sense, the uncertainty here is endogenous.

[156] This comes without any loss of generality.

[157] Under our general description, this case is equivalent to the materialization of state ω_1.

[158] Under our general description, this case is equivalent to the materialization of state ω_0.

[159] In this case the seller has also learned all the relevant information about the buyer's setups and has come to believe that the buyer would want to buy a software for a x_1 setup and he (the seller) could produce a software w_1 with functions f_1 that would satisfy the x_1 setup at a price acceptable to the buyer. The buyer also finds the prospect of this transaction profitable and then asks the seller to produce software w_1. (This corresponds to the case of the buyer expecting a utility equal to v_{11}. *See supra* note --.) The seller accepts. (This corresponds to the case of the seller expecting a cost equal to c_{11}. *See supra* note --.) Similar to the base illustration in Part II.A, the contract is here self-enforceable. Indeed, this is a case where the parties have no conflict of interest and they have identified the software to be produce at a price convenient for both. *See supra* text accompanying notes ---.

[160] In this case, after the seller has learned all the relevant information about the buyer's setups, he comes to realize that the suitable setup for the buyer is x_0 requiring a software with functions f_0. Both the seller and the buyer, however, agree this is not a convenient match. For example, the seller realizes that he could not produce software with the required functions that could satisfy the buyer's x_0 setup at an acceptable price. Here, the parties will voluntarily break up (i.e., rescind the contract), which is equivalent to say that that they would agree to produce w_0, (i.e., the null software). This corresponds to the case of the buyer and seller expecting a utility and a cost respectively equal to v_{11} and c_{11}. *See supra* note ---.

value.[161] The seller does not know all the attributes of the buyer's possible setups. Both parties believe that the only viable software for the buyer is w_2 , which has functions f_2, and would satisfy the buyer's setup x_2. However, the parties have divergent beliefs on the value of their collaboration due to the asymmetric information about their types. Specifically, under $\Delta>0$, the seller has learned too little about the buyer's setups and given the distribution of unknown setup attributes, he believes that his expected payoffs are negative. For example, the seller could be concerned about setup costs, the buyer's intensity of use in conjunction with other applications, the seller's ability to monitor use, possible warranty or products liability claims concerning the production of goods that the buyer manufactures employing the software and other factors. Under these limitations, the seller does not believe that it could profitably produce software w_2 at a price that the buyer would pay.[162] On the other hand, the buyer may be reluctant to share full information relevant to these concerns because some of it could be generic: it could be employed by other buyers who could be more profitable partners for the seller. The buyer also may have other reasons not to be forthcoming. Nevertheless, the buyer has come to believe that the seller could produce w_2 at a price, and under other terms, that the buyer would agree to and be profitable to her.[163] The buyer thus wants the seller to continue by producing and installing w_2 but the seller refuses. For simplicity, we also assume here that the buyer is correct, that is, if private information became public (i.e., $\Delta=0$), the parties would voluntary proceed to the implementation stage, in which the seller produces software w_2 (with functions f_2) that the buyer will use in its x_2 setup.

In today's legal world, two things could happen under these circumstances, and each would be inefficient. The parties could either break up because the seller would refuse to go forward or litigate. For example, either party could sue the other for violation of the duty of good faith, interpreting the other party's actions negatively. Based on his first-order beliefs on the value of the collaboration, the seller will expect the court to acknowledge that the collaboration is indeed not valuable. Accordingly, he could,for example, sue the buyer for opportunistically trying to force him into an unprofitable venture. Conversely, based on her own first-order beliefs on the value of the collaboration, the buyer will expect the court to acknowledge that the collaboration is valuable. Indeed, given their inconsistent beliefs on the other's type, the parties will have correspondingly inconsistent beliefs on the court type.[164]

Now consider how interim interpretation would work. Suppose that the buyer asks the court's interim interpretation to affirm her view—that there is a particular efficient path forward.. (Of course, the rationality of this request

[161] We can assume, under our general description, this case is equivalent to the materialization of state ω_2.
[162] Put a little more deeply, the seller faces an adverse selection problem. The buyer wants the seller to make a software not only in possibly successful cases but also in cases that would generate too little surplus to fully compensate the seller's costs. When the buyer demands continuation, the seller does not know enough -- Δ remains large -- to know which case is which.
[163] In the notation of our base case, this may correspond to the buyer's utility equal to v_{22}, with a positive continuation value, that is $V_B>0$. *See supra* note ---.
[164] *See supra* note ---.

presupposes that the buyer is asymmetrically informed relative to the seller on how the court will interpret the legitimacy of its request.) At this point, the buyer is likely to be required to disclose additional private information in the action because the seller will demand discovery and the court itself, in a hearing, would also ask questions. Indeed, it is reasonable to assume that both parties would disclose more private information during the interim interpretation process than they would have disclosed in the remedy's absence. If the buyer's private information is verifiable, the court's request for information disclosure directly, materially shrinks Δ, the informational asymmetry between the buyer and the seller. Because we have assumed that continuance is efficient in our illustration, the now informed seller also would realize that continuance would be in his best interest. In this case, interim interpretation functions as an *information-forcing device.* The result is that parties would efficiently move from case (iii)—one of them incorrectly believes a break up would be best—to case (i)—both correctly believe that continuation would be efficient.

When information is not verifiable, however, forced disclosure may give parties incentives to strategically manipulate facts. Thus, the seller could believe that the buyer would strategically manipulate disclosure to induce the court to read the framework arrangement as the buyer prefers.[165] On her part, the buyer could fear that the seller could strategically use the disclosed information at the buyer's expense (e.g., to enter into deals with the buyer's competitors). As a result, either the seller would not trust the information disclosed by the buyer or the buyer would lack the incentives to truthfully reveal information. In these cases, the court's function switches from an information-forcing device to a mediation device that can induce truthful revelation. Interim interpretation becomes a means for the court to propose to the parties a forward looking assessment of their arrangement that removes uncertainty on the parties' future rights and therefore facilitate Coasian bargaining.[166] For example, in our illustration, the interpreted contract might be construed to reassure the buyer that the seller will not be able to exploit the disclosed information (e.g., asserting an implied non-competition duty), thereby inducing the buyer to truthfully reveal information. As long as the court can publicly advance a proposition to the parties, the parties' asymmetric information on their rights (i.e., the extended court type problem) vanishes. If the court's proposed arrangement is incentive-compatible and this is knowable by the seller, this would also serve to address the seller's concerns on the buyer's opportunism. Thus, once uncertainty on the parties' rights is reduced, it is the parties that will voluntary disclose information, reduce their asymmetric information and, ultimately, find the way forward, if one exists.

[165] Add note on cheap talk.
[166] A mediator typically makes a proposition to the parties and the parties might accept it or reject it. But a mediator's interpretation is not conclusive. Here, instead, because the mediation comes from the court-final adjudicator, there no longer is any residual uncertainty on the allocation of rights that is specified in the mediation proposal.

Of course, the court's mediation may fail—for example because an incentive-compatible interpreted contract does not exist. But without it, an inefficient outcome would be much more likely. Finally, we emphasize that interim interpretation here will likely only be occurring off the equilibrium path. Once the parties realize that the court can induce information disclosure—either through mandated discovery or by implementing an incentive-compatible revelation mechanism[167]—the parties may prefer to control disclosure themselves, making interim interpretation a valuable tool for efficient contract design in collaborative contracts.[168]

V. INTERIM INTERPRETATION AND DISTRIBUTIVE CONCERNS

A. Risk-neutrality and Risk Aversion

The parties in our examples were risk neutral. This usually is an accurate assumption when analyzing the behavior of sophisticated commercial parties.[169] As noted by one of us elsewhere, it is only when a correct interpretation is particularly important to a firm,that the firm will act as if it were risk averse: that is, be willing to incur costs to reduce expected uncertainty.[170] However, sometimes in collaborative agreements, one party is a large, diversified player, while the other is a smaller counterparty. This party is undiversified, and so likely acts as if it were risk averse. In this section, then, we explore the implications of interim interpretation when at least one of the parties is risk averse.

Interim interpretation has both fairness ell and efficiency implicatims. Beginning with efficiency, interim interpretation reduces uncertainty regarding court types. Therefore, the utility of the risk-averse party should increase when this remedy is available. When possible disparities between the contracting parties' risk preferences also are taken into account, this property of interim interpretation may no longer hold. Rather, the risk neutral party can exploit its risk averse counterparty.

To see haow this possibility can occur, realize that the parties face three types of uncertainty: (i) about party types; (ii) about the court type; (iii) about whether a deal will complete and on what terms. A risk averse party is particularly concerned about the third type. Thus, she may be willing to trade less favorable terms (than she could otherwise receive) for an increased probability that the deal will complete. This preference permits the risk neutral party to extract more surplus—to realize what we call, an "uncertainty rent."[171]

Permitting both parties to request an interim interpretation when their risk preferences differ substantially might neither facilitate efficiency nor ameliorate the distributive concern. When the risk averse party anticipates that the risk neutral party is also part of the interim interpretation process, the former may prefer not to request interim interpretation initially. This is because the risk averse partywill

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[167] Here assuming that an incentive compatible contract is possible.
[168] Add note on more complex mechanisms a' la Maskin.
[169] Scwartz & Scott 2003, at 575-77.
[170] Schwartz & Scott, 2010, 947-48.
[171] The uncertainty rent the risk neutral party can extract from the risk averse party exclusively depends on the fact that the parties discount uncertainty (i.e., risk) differently.

weigh more heavily than her counterparty the possibility of an unfavorable interpretation. In expectation, then, the risk averse party might forego her right to interim interpretation in favor of accepting a low-price certainty equivalent from the risk neutral party.

A tentative solution to this problem would be to permit a party privately to request an interim interpretation; the counterparty would not be part of the interim interpretation process. Under this structure, a court could provide the risk averse party with, in effect, a qualified opinion on contract interpretation. This qualified opinion would help mitigate the party's bargaining disadvantage by providing her with private information regarding the court's type. The level of a party's diversification, which can also be inferred by the scale of the firm, would provide a proxy to tell apart a risk averse party from a risk neutral party. For example, if one firm is well-diversified across multiple projects and the other is smaller and has fewer contracts, the court would prima facie infer that the second party exhibits some risk aversion relative to the first.[172]

Note that the risk neutral party would also have the right to ask for private interim interpretation, and both parties, of course, would retain the right to request (simultaneously) an interpretation after breach. Therefore, at the equilibrium, the risk averse party would not have an incentive to report untruthfully the facts at the interim interpretation stage. Indeed, she would anticipate that the risk neutral party could subsequently challenge those facts, where disagreement would prompt a confrontation between the parties. Under this disagreement, the court's interpretation would eventually become public knowledge, thus causing the risk neutral party to lose her informational advantage over the risk averse party. Finally, an action for interim interpretation modified along these lines could serve an important equitable function, compatible with efficiency. Interim interpretation could help reduce the space for uncertainty rents and redistribute welfare from risk-neutral parties (e.g., larger, fully diversified firms) to weaker, risk-averse parties (e.g., smaller, less-diversified firms and consumers).[173]

B. The Distributional Value of Private Interim Interpretation

An additional variation of our illustration is helpful to clarify the mechanism of private interim interpretation. Suppose the buyer is risk averse and the seller is risk neutral. The realized state is ω_2 but the seller refuses to deliver w_2, the efficient operating system for that state. Instead, the seller offers instead to tender w_1 (i.e., the old, less costly software).. Also, assume that the cost of producing w_2 exceeds the contract price so that it is individually efficient for the seller to breach if delivering w_2 is required.[174] Finally, suppose the parties have similar beliefs about

[172] Of course, this does not mean that the court can perfectly observe the exact level of risk aversion: this would require to know the curvature of the firm's utility function. But the court can have an approximate inference about risk aversion.
[173] Note on constitutionality.
[174] This fact changed the basic assumptions of the main illustration as A2 no longer holds here. Indeed, this version of our illustration assumes that parties are off the equilibrium path because it does not describe the renegotiation mechanism inducing the seller to produce and deliver w_2. It assumes, indeed, that the seller has already delivered w_1.

the court's type,[175] so that the only source of uncertainty is the likelihood that a court will award expectation damages to the buyer if the seller delivers w_1. To make the example concrete, both the buyer and the seller expect the seller will pay expectation damages equal to 100[176] with probability p=.6,[177] and not pay them with probability (1-p)=.4.[178]

The seller's expected utility from breach is -60; she expects to pay 60 to the buyer.[179] The buyer, however, is risk averse and hence will not evaluate monetary payoffs linearly; instead, she discounts her utility from expected monetary payoffs at an increasing rate. To represent this behavior here, assume that the buyer's expected value equals the square root of money value. Hence, the buyer's expected value is .6 ($\sqrt{100}$) = 6. Under this level of risk aversion, then, it is easy to see that the seller will always be able to induce the buyer to accept an offer for the certainty equivalent of her expected utility. Specifically, the buyer will be willing to accept 36 (i.e. $\sqrt{36}=6$) to settle the case.[180] By exploiting the risk aversion of the buyer, the seller can then extract an uncertainty rent of 24 from the buyer (i.e., 60, which is what the seller should have paid to settle with the buyer had the buyer been risk neutral, minus 36, the certainty equivalent the risk averse buyer is willing to accept to settle the case.)

Now consider the effect of granting the buyer the right to request an interim interpretation of the contract, i.e., ask the court whether the buyer can legitimately claim w_2 from the seller upon ω_2. Suppose that the court's interim interpretation supports the buyer's claim, so that after interim interpretation, the buyer anticipates she will receive expectation damages with an increased probability of .8 (instead than .6). Let's also assume that the amount of estimated expectation damages falls from 100 to 75, for example because the court holds that the buyer could have better mitigated her damage. Note that from the perspective of the seller, nothing changes under the interpreted contract: the seller expected to pay .6(100) = 60 before interim interpretation (i.e., without settling) and expects to pay .8(75) = 60 after interim interpretation. However, once the buyer communicates this interpretation to the seller, the new distribution of outcomes changes the transfer that the seller has to

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[175] When the parties have heterogenous risk preferences, the coordination function served by the court under interim interpretation has a distributive function rather than an epistemic function: the court protects the weaker, risk-averse party from exploitation from the stronger, risk-neutral party. Hence, our assumption that the parties share the same beliefs about the court type. Beyond the stylized details of the example, however, the court may well serve both functions for relationships with heterogenous risk preferences.

[176] 100 corresponds to the marginal increase in value from the efficient transfer -- v_{22}-v_{21} if the buyer were risk neutral.

[177] Not that this probability, p, corresponds to (1-p_2)=(1-q_2) in the version of the illustration without risk aversion.

[178] Similarly, (1-p) corresponds to p_2=q_2.

[179] This presupposes that the seller utility function is of the form u(x) = x, where x is the monetary payoff that can be negative.

[180] This modeling follows the Bernoulli expected utility approach, which is the simplest way to describe risk aversion. The expected utility of an agent is $U(p)=\sum u(x_i)p_i$, where pi is the probability that an outcome indexed by i with payoff xi is realized, and the function u is the utility of each payoff. See Gollier, THE ECONOMICS OF RISK AND UNCERTAINTY.

give the buyer in order to settle and avoid litigation for contract breach.[181] Before interim interpretation, the risk averse buyer was willing to accept 36 as a certainty equivalent that would give her a utility of 6,[182] which leaves the seller an uncertainty rent of 24. After interim interpretation, the seller's uncertainty rent is reduced, because interim interpretation reduces uncertainty and hence results in an increase of the buyer's certainty equivalent to 6.93 = .8 (√75). The seller will now have to pay the buyer a certainty equivalent of 48 to settle.[183] From a distributive perspective, this means that interim interpretation reduces the sellers' uncertainty rent from 24 (i.e., 60-36) to 12 (i.e., 60-48),[184] limiting the seller's ability to exploit the buyer's risk aversion.

This conclusion does not just have distributional implications, which are apparent, but also efficiency implications. Indeed, the redistributive effect in favor of the risk averse party decreases the likelihood that she may discount the risk of future expropriation by the risk neutral party and decide not to enter into the contract in the first place. Hence, the result is that parties would make more contracts if private interim interpretation were available. [185]

However, that a similar outcome would take place at the equilibrium is not guaranteed. Multiple equilibria are possible. For example, the seller could also privately ask the court for an interim interpretation, in which case the buyer would no longer have exclusive access to the court's private information. If both parties report facts to the court truthfully, court interpretation would become common knowledge. At this point, then, one could object that a rational risk averse party could still prefer to receive the certainty equivalent rather than request interim interpretation because invoking the court might be a risky bet that a risk averse party would not undertake. In expectation, this could induce the parties to agree not to ask the court for interim interpretation, implying that the buyer would always settle interpretation disputes by accepting a (lower) certainty equivalent.

A possible way to overcome this distortion would be to make similar agreements unenforceable. For example, the court could consider whether the parties are more likely to have homogenous or heterogenous risk preferences. In the first case, the parties' decision to ban interim interpretation should always be enforceable, consistent with the default nature of this action. However, if the parties have heterogenous risk preferences, the court would have a normative reason not to enforce a contractual provision banning private interim interpretation. More

[181] Instead, if the court's interim interpretation was unfavorable to the buyer, the buyer would keep this information to herself and accept the seller's certainty equivalent of 36. Preserving this ability of the buyer, as explained above, is essential to ensure that the buyer has the incentive to plead for interim interpretation in the first place.
[182] Indeed, √36 = .6 (√100).
[183] Indeed, 6.93 = √48.
[184] Note that interim interpretation can also solve uncertainty completely. When this happens, and without changing the amount of the expectation damages, the buyer would have a claim of 100 against the seller. If, instead, interim interpretation does not change the seller's expected cost, the damages change from 100 to 60. In such a case, a risk averse party is willing to accept from a seller the certain equivalent of 36, which gives her an utility of 6 = √36, before uncertainty is resolved, while after uncertainty is resolved the risk averse party would not accept less than 60, which gives her a utility of 7.75 = √60.
[185] Cf. Schwartz Sepe 2021.

broadly, our intuition is that interim interpretation would be a viable mechanism to address distributive concerns arising from heterogenous risk preferences as long as the claims of risk averse parties have strong legal grounds (i.e., risk averse parties have a good probability of winning the case). Under these circumstances, risk averse parties would request interim interpretation, because this mechanism would increase their option value. In fact, risk averse parties might have intrinsic incentives to prove their rights when their case is strong (similar to what happens with innocent parties in criminal trials),[186] which could help overcome the need for private access to interim interpretation initially.

CONCLUSION

In a standard transaction, the parties contract at t^0, something happens at t^1 that affects a party's payoff under the contract, or doesn't happen, and the seller tenders at t^2, or doesn't tender. This article considers the case when something happens. In the law and economics and contract theory literatures, if something happens parties are assumed to renegotiate to the ex post efficient state: that is, they modify their contract so that it directs a trade under more efficient terms or the parties agree not to trade. Renegotiation occurs because, it is further assumed, uncertainty resolves at t^1 or shortly thereafter. The parties then know the realized values of the contract parameters.

The assumption that uncertainty *always* resolves is unrealistic. Rather, renegotiation can fail for two reasons. First, parties retain private information about their types. For example, under the theory of efficient breach, if tender of the contract goods would be inefficient, the seller will exit on paying the buyer its expectation plus a share of the exit rent. This bargain would occur, however, only if the seller knew the buyer's valuation, and the buyer knew the seller's opportunity cost of performance under the contract. The theory does not apply when asymmetric information preludes renegotiation.

Renegotiation also can fail for a reason we introduce into the literature. The parties may not know the court's "type": that is, which facts a court will find salient, which legal doctrines it will regard as relevant, and how the court is likely to apply the law to the facts. When parties' second order beliefs differ -- they have different views regarding the court's probable type -- they may not renegotiate to the ex post efficient result, even if they are informed about each other's type and thus know that renegotiation gains exist.

There often is litigation when renegotiation fails. The court either interprets the contract to find what it directs or completes the contract with a new term. The court then "enforces" the interpreted or completed contract. Enforcement means that the court decides which party has to pay money to the other. Enforcement thus is not productive: whether a transaction would have been efficient or not is no longer relevant. Only a payment obligation remains.

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[186] See Daniel L. Rubinfeld & David E.M. Sappington, *Efficient Awards and Standards of Proof in Judicial Proceedings*, 18 RAND J. ECON. 308, 310 (1987) (arguing that innocent parties signal innocence by spending more effort than guilty parties because "[i]f this were not the case, litigation would serve no purpose, since it would not enable the court to distinguish more accurately the innocent from the guilty").

We suggest a remedy for this unsatisfactory outcome: interim interpretation. If something happens, a party should be able to obtain from the court, at t^{1+}, an opinion setting out the court's view of the parties' contract. This opinion would not require either party to do anything, but would bind if the parties later litigate. Interim interpretation could travel under two familiar flags: a declaratory judgment action or an action for reformation.

Interim interpretation would have two results. First, it would resolve uncertainty about the court's type, thereby eliminating one major cause of renegotiation failure. Second, interim interpretation would serve an information forcing function. A party would know that it would have to disclose private information during the course of the case in order to persuade the court to its view of what the contract directs. Indeed, parties would voluntarily disclose much private information when they anticipate the action because private disclosure is less costly than required disclosure. Information forcing, in turn, would eliminating the other cause of renegotiation failure: asymmetric information about party types. And of significance, the information that comes to light in an interim interpretation action -- about court and party types -- would be *productive.* It would permit parties to continue efficient transactions and efficiently terminate the others.

Interim interpretation, we also show, would play an important role in connection with what we term "new economy collaborations". These are arrangements between two firms jointly to create a new product. These arrangements today often break up in consequence of parties coming to have different beliefs about whether the collaboration should continue or not. Again, such disagreements can flourish because parties often are asymmetrically informed about their own types or a court's type. The court's role here, however, would differ from its role in the usual case. The question for parties and the court is not what a final contract means, but rather is whether parties should reach the final contract stage. The court's role thus should shift from adjudication -- fixing contract content -- to mediation -- indicating an efficient party forward, if one exists. In either case, though, interim interpretation would reduce the likelihood of inefficient breakups.

Finally, we suggest that interim interpretation can encourage participation in ventures by risk averse parties. Here the paradigm would be a small startup wanting to partner with a large, diversified company. The ability of the smaller party to get an interpretation of what its contract with the larger party would require would reduce uncertainty and reduce the rent the risk averse party would have to pay its partner for assurances as to how the deal would go.

We end by stressing that an action for interim interpretation could play a constructive role in a wide variety of legal areas because there is a common commercial need: to facilitate party ability to respond to changing circumstances by renegotiating to the currently efficient outcome. Interim interpretation is a novel but powerful method for meeting this need.

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