THE VALUE OF ACCURACY IN CONTRACT INTERPRETATION

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I. INTRODUCTION

Contract interpretation is the most litigated and contested area of contract law.[1] The debate, sometimes framed as "the battle between the titans of contract, Samuel Williston and Arthur Corbin",[2] divides courts and scholars into two main camps: textualists and contextualists.[3] Textualists suggest that, when interpreting contracts, courts should refrain from considering contextual evidence - such as, past dealing, course of performance, and custom. Contextualists, advocating the opposite view, argue that context must be taken into account. Both styles of interpretation gained ground in American contract law. Today, most jurisdictions follow textualism, while the Uniform Commercial Code (U.C.C), the Restatement (Second) of Contracts, and certain jurisdictions, such as California, adopt contextualism.[4]

From the economic perspective, rules of contract interpretation are considered majoritarian default rules.[5] The parties, that is, should be free to choose the rules of interpretation they prefer and, if no such choice was made, courts should apply the rules of interpretation most parties would have preferred (i.e., the majoritarian preference).[6] But, when it comes to determining what is the rule of interpretation

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[1] Ronald J. Gilson et al, *Text And Context: Contract Interpretation as Contract Design*, 100 CORNELL L. REV. 23, 23 (2014); Omri Ben-Shahar, *A Bargaining Power Theory of Default Rule*, 109 COLUM. L. REV. 396, 396 (2009).

[2] *See* Gilson et al, *supra* note 1 at 25.

[3] Alan Schwartz & Robert Scott, *Contract Interpretation Redux*, 119 YALE L.J. 926, 928 (2009) [hereinafter *Contract Interpretation*].

[4] *See* Gilson et al, *supra* note 1 at 26-27 and citations there.

[5] *See* Alan Schwartz & Robert Scott, *Contract Theory and the Limits of Contract Law*, 113 YALE L.J. 541 (2003) [hereinafter *Contract Theory*]; *Contract Interpretation, supra* note 3. *See*, also: Shawn J. Bayern, *Contract Meta-Interpretation*, 49 U.C. DAVIS L. REV. 1097, 1104 (2016) (suggesting that Schwartz and Scott offer "the leading modern statement of the law-and-economics movement's theoretically derived formalism"). For a different economic perspective on contractual rules of interpretation, *see*: Richard Posner, *The Law and Economics of Contract Interpretation*, 83 TEX. L. REV. 1581 (2004).

[6] *See* Ariel Porat & Lior Jacob Strahilevitz, *Personalizing Default Rules and Disclosure with Big Data*, 112 MICH. L. REV. 1417, 1425 (2014).

preferred by the majority of parties, scholars have offered a multitude of sometimes conflicting and often seemingly unrelated considerations and perspective.

The main thesis of this Essay is that this fragmented picture is the result of a wrong turn taken early on in the discussion. Risk neutral parties, we argue, sometimes do care about variance in interpretation. Furthermore, once the significance of variance is realized, integrating the different considerations becomes straightforward, because the different consideration can be re-conceptualized through their relation to variance. Eventually, we show, putting the different considerations on the same scale allows for a more coherent and comprehensive analysis of majoritarian preferences of interpretive regime.

One perspective, offered by Alan Schwartz and Robert Scott, suggests that risk neutral parties main concern is minimizing their litigation costs. More specifically, as long as courts are correct on average (i.e., unbiased),[7] risk neutral parties would be indifferent to variance in court interpretation. Thus, even if contextualism produces greater accuracy, most parties would prefer a textualist style of interpretation which permits fewer evidence and reduces litigation costs.[8]

A different perspective was offered by Omri Ben-Shahar, who suggested distinguishing two types of contractual terms: (i) *surplus maximizing terms,* that affect the efficiency of the parties transactions; and (ii) *purely distributive terms*, such as price, that pertain only to the distribution of the contractual surplus.[9] When it comes to later, Ben-Shahar argues, parties would seek to minimize their drafting and "psychological costs" by adopting an interpretive regime that mimics their bargaining power.[10] Determining the parties' relative bargaining power requires

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[7] That is, if courts are as likely to err in favor of one party as they are likely to err in favor of the other party.

[8] *See Contract Theory*, *supra* note 5 at 853 (stating that parties prefer that courts use textualist interpretive style for it is less evidentiary based); *Contract Interpretation, supra* note 3 at 947 (claim that interpretive rules should be textualist).

[9] Omri Ben-Shahar, *supra* note 1 at 396.

[10] *Id*, at 412.

courts to go beyond the contractual text itself. Thus, Ben-Shahar's argument implies that for purely distributive terms most parties would prefer contextualism.

Finally, Gilson and his colleagues offered yet another different view, according to which, when design their agreement, parties choose between investing in ex-ante drafting and in ex-post litigation. What drives this choice, they claim, is the contractual environment and, in particular, the level of *contractual uncertainty* - That is, the parties' confidence and ability to anticipate the state of world at the time of performance[11] - and *market thickness*.[12] Where uncertainty is low, drafting is relatively cheap and most parties would prefer a textualist regime that requires greater investment in drafting and smaller investment in litigation. Where the environment is more uncertain, drafting become more costly and parties would prefer shifting costs from ex-ante drafting to ex-post adjudication - that is, they would prefer a contextualist style of interpretation.[13]

Market structure affects the parties' preferred forum of adjudication. Industry customs and standards, Gilson and his colleagues claim, are more likely to emerge in thick markets. And, because customs are more easily accessible to insiders, forums such trade associations can incorporate them without relying on the parties' to produce evidence of their existence and content. Thus, in thick market, parties would choose to adjudicate in expert tribunals that can incorporate industry standards while keeping to a textualist style of interpretation, thereby reducing the parties' drafting and litigation costs.[14]

The three perspectives offer a host of difficult-to-integrate considerations for determining the parties' preference. As mentioned, we argue that this fragmented picture comes from the under-appreciation of the importance of variance in determining parties' majoritarian preference. Variance, we show, has an independent contribution to determining the parties' preferred style of interpretation. And, it also subsumes the effects of the other factors just discussed.

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[11] *See* Gilson et al, *supra* note 1 (Gilson et al define uncertainty as "exogenous events that may affect the parties' obligations are unknown or cannot be estimated probabilistically").

[12] Market thickness pertains to the scale and frequency of (similar) transactions, *see*: *id*.

[13] *Id*.

[14] *Id*.

Thus, by putting the different considerations on a single scale, we can offer a clear and coherent analysis of parties' preferences.

Parties care about variance in interpretation because and to the extent greater variance reduces overall surplus. To see why this is case, consider a farmer seeking to buy a plot of land. The farmer's ultimate goal is to maximize his overall yield. Thus, the farmer would care about a plot's mean yield, not its variance. Crops, however, require a certain amount of water to grow, and both over and under watering reduce a plot's yield. A risk-neutral farmer would therefore care about variance in rainfall because, even if the average rainfall in all plots is optimal, the smaller variance in rainfall the greater the plot's productivity.[15]

The same, we suggest, applies to variance in contract interpretation. Risk neutral parties seek to maximize their joint surplus.[16] Thus, they care about the mean joint surplus, not its variance. Greater variance in interpretation, however, may reduce the mean joint surplus. And, when this is the case, risk neutral parties would seek to minimize variance in interpretation.

To illustrate, consider a contract for the production of a machine. The buyer can fit the machine in his assembly-line in two weeks and would maximize its profit if delivery occurs within that time. The seller, on the other hand, incurs additional costs for producing the machine in six weeks or less. The parties' joint surplus is maximized if the machine is delivered within four weeks and they agree accordingly. Transactions costs, however, prevent them from drafting an unambiguous term and courts might interpret the term as requiring delivery in two, four, or six weeks. Because delivery in 4 weeks is the efficient term, interpreting the agreement as requiring a different delivery time would reduce the parties' joint surplus. For simplicity, assume that enforcing the agreed upon term would produce a joint surplus of 9, but that enforcing any of the other two alternatives would produce a joint surplus of 6. This means that if, for example, contextualist courts always enforce the correct interpretation and textualist courts enforce each of the three interpretations with equal probability, contextualism

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[15] One may argue that the effects of excessive or insufficient rain may be mitigated, but this too is likely to come at cost.

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would produce a joint surplus of 9 and textualism a joint surplus of 7. Risk neutral parties, therefore, would prefer contextualism if the added joint surplus due to greater accuracy exceeds the added litigation cost.

Greater variance in interpretation can also decrease the parties' joint surplus by incentivizing them to adopt inefficient terms. This is more likely to occur when errors in interpretation of similar magnitude have a different effect on the parties' joint surplus. Consider the machine example once more, and assume that the seller's added costs from delivery in less than four weeks are much greater than buyer's lost profits from delivery in more than four weeks. The parties', then, would seek to reduce the likelihood that courts would enforce a delivery time shorter than four weeks. When variance in interpretation is relatively high, this may lead them to set the delivery time to longer than four weeks – that is, to agree on an inefficient term.[17]

The Importance of variance, we show, can explain the significance of the various considerations already discussed. First, variance in interpretation explains the distinction between surplus maximizing terms and purely distributive terms because, while variance is significant when it affects the joint surplus, neither the content nor variance in interpretation of purely distributive terms can affect the joint surplus. Indeed, what makes terms purely distributive is their inability to affect the joint surplus. Thus, parties would seek to reduce variance in the interpretation of surplus-enhancing terms, but would be indifferent to variance when purely distributive terms are concerned.

Second, the choice between investing in drafting or litigation costs can, and we suggest should, be understood as a choice between two mechanisms to reduce variance in interpretation. More specifically, greater investment in drafting reduces variance by producing a more complete agreement. Litigation costs, on the other hand, increase accuracy because providing courts with more evidence

[17] Another way in which the parties can adopt inefficient terms in order to reduce variance is to incorporate a mechanism to the contract which is less efficient but is also unambiguous. For example, the parties can agree on a specified delivery date instead of flexible periods, to make sure that the term is less open to interpretation.

reduces reliance on judges' personal experience and expertizes, which is often the source of variance in their interpretation.[18]

Uncertainty too can be reframed in terms of relation to variance. Parties can respond to uncertainty, by drafting an agreement that addresses all possible state of the world. But, Gilson and his Colleagues show, because the cost of negotiating and drafting such a contract is often prohibitive, parties would often choose to use flexible standards rather than of rules.[19] Thus, greater uncertainty translates into greater variance in interpretation because the use of standards requires courts to use more discretion when resolving interpretive disputes. As mentioned, the parties then reduce this variance by increasing their investment in litigation. That is, by adopting a contextulists regime of interpretation, the parties provide courts with more evidence, which would reduce the variance in their interpretation of the parties' standards.

Finally, the significance of market thickness is explained by variance as well. In thick markets, parties are often repeat players who use contractual language that incorporates industry customs and standards. Turning to expert tribunals reduces variance in interpretation because expert tribunals – such as trade associations – employ insiders with the relevant experience and expertise. Thus, unlike generalist courts, when adjudicating before an expert tribunal parties can be confident that their use of industry-specific language would be understood as intended. That is, they can expect less variance in interpretation.

We can now recast the question of parties' preferences in terms of variance alone. In particular, we suggest that most parties would prefer a textualist style of interpretation when they anticipate relatively low variance or when they are indifferent to its existence. Conversely, where variance is important and relatively high, most parties would prefer contextualism.

The question of parties' preferences, then, can be reduces to the question the scope and significance of variance. This allows us to integrate the different

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[18] Avery W. Katz, *The Economics of Form and Substance in Contract Interpretation*, 104 COLUM. L. REV. 496 (2004)

[19] *See* Gilson et al, *supra* note 1

considerations pertaining to the parties' preferences. More specifically, variance would be relatively high when drafting is relatively costly; the contractual environment is uncertain; and expert tribunals are unavailable. Variance is significant when relatively small deviations from the parties' intent have a significant effect on their joint surplus. Conversely, variance is patently unimportant to risk-neutral parties when interpreting terms, such as price terms, which are purely distributive and cannot affect the joint surplus.

The reminder of this Essay is structured as follows: Part II explores the different considerations pertaining to the parties' preferred style of interpretation; in Part III we offer our main argument, that risk neutral parties sometimes care about variance, and show how variance in interpretation accounts for various considerations presented in Part II; Part IV then show that, at several important occasions, both courts and contact law recognize the importance of variance; and Part V concludes.

II. WHAT DETERMINES PARTIES PREFERENCE OF INTERPRETIVE STYLE

Contract interpretation is the process of determining the meaning of the parties' agreement,[20] and rules of interpretation are therefore often understood as aimed at producing the "correct" meaning - that is, the meaning intended by the parties.[21] From this perspective, the textualism-contextualism can be framed as asking which style of interpretation produces a more accurate outcome – that is, an interpretation that aligns with the parties' intention.

The prevailing economic analysis of contract interpretation suggests a different outlook. It argues that rules of interpretation are no different than rules pertaining to the content of the agreement. Indeed, the former often inform and determine the latter. Thus, just as the parties are (usually)) free to alter the legal rules that set the terms of their agreement, they should also be free to alter the rules governing its interpretation.[22]

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Rules of interpretation, then, should be treated like any other default rule. And, because default rules can be altered, the effect of a rule that goes against the parties' preference is to increase the parties' transaction costs, as it requires them to investment in opting-out of the default. Placed within the default rule paradigm, then, the question of what should be the rule of interpretation becomes a question of what style of interpretation most parties would prefer.[23]

The shift from attempting to find the correct answer to inquiring into the parties preferences was followed by two meaningful developments. The first is rejecting the significance of accuracy. "[A] risk-neutral party", Schwartz and Scott famously claimed, "cares about the mean of the interpretation distribution but not the variance."[24] The second was a re-focus of research, from the style of interpretation that produces greater accuracy to determining the factors that shape parties' preferences. On this later point, scholars have offered an array of consideration, which often appear unrelated and sometimes lead to contradictory conclusions.

In the next Part we argue that the fragmented picture that emerged from attempts to determine the parties' preferences comes from the failure to appreciate the way accuracy affects preferences. Indeed, we suggest that most factors recognized in the literature as pertaining to the parties' preferences are best understood through their relations to accuracy. But to do this, we must first review the factors shown to affect the parties' preferences. Though most (if not all) factors can be considered as transactions costs in the wider sense, we divide them into four categories: (i) *transaction costs* in the narrow sense; (ii) the *contractual environment;* (ii) the disputed *term's type*; and (iv) the possibility of *strategic behavior and irrationality*.

A. *Transaction Costs*

Transactions costs are one factor widely recognized as shaping the parties' preferences over the design of the transaction. Taken in their widest meaning,

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transaction costs may encompass all factors that determine preferences about the transaction.[25] In this Section we address transaction costs in a narrower sense, which includes: the costs of formulating the agreement (drafting costs) and of enforcing the parties' intentions (litigation and settlement costs).[26] As we shall see, even when adopting this narrow definition, a conclusion about majoritarian preferences is hard to come by.

Drafting Costs

Contextualism is often touted for its ability to reduce drafting costs. Parties invest in drafting to ensure that their agreement would be sufficiently clear for courts to enforce as intended. Contextualism reduces the parties need to draft clear and precise terms because it allows them to bring external evidence of their (shared) intentions. This, it is argued, increases the likelihood of enforcing the parties' intended agreement even when its terms are not clearly drafted. Under contextualism, then, parties can and would invest less in drafting.[27]

Textualists have mounted several objections to this line of argument. One type of objections rejects the premise of the contextualist argument, and suggests that allowing parties to offer extrinsic evidence of their shared intentions would actually increase drafting costs. That is, because allowing the parties to rely on external evidence makes all but very precise and unambiguous terms subject to interpretive disputes in the future. A party wishing to prevent the possibility that the meaning of a term would be disputed in court would therefore have to invest in drafting to the point that no external evidence could undermine its intended meaning.[28]

A second type of objection concedes that textualism increases drafting costs but maintains that the increased investment is desirable because it reduces the

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[27] Silverstein, A Primer, (text at fns 183 – 187).

[28] Bernstein, Custom, at 98.

frequency of litigation. Here too, textualists maintain that allowing more evidence makes it more likely that the meaning of terms would be disputed.[29]

A third and final type of objection, offered by Schwartz and Scott, claims that, if courts are correct on average (i.e., unbiased), a risk neutral party would not care about accuracy in interpretation and that therefore, irrespective of the interpretive regime, "[i]t is optimal for risk-neutral firms to invest resources in drafting until the writing is sufficiently clear, in an objective sense, so that the mean of the distribution of possible judicial interpretations is the correct interpretation".[30]

Litigation Costs

The (expected) litigation cost of any particular agreement is a function of the frequency of litigation and the cost of adjudicating any particular dispute.[31] As to the former, we already saw textualists argue that contextualism increases the frequency of litigation because it dis-incentivizes investment in drafting clear and complete agreements,[32] and expends the parties' ability to dispute a term's meaning by allowing them to base their claim on external evidence of their shared intentions and meaning.[33]

Textualists further suggest that contextualism increases the cost of any particular dispute because allowing external evidence increases the costs of collecting and presenting evidence,[34] as well as prolongs the adjudicative process - for example, by reducing the probability that the case will be decided on summary judgment.[35]

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[29] Whitford (2001); George M. Cohen (2011)

[30] At, 577

[31] The type of transaction cost that Schwatz and Scott argue *does* determine the parties' preferences are litigation costs. *See* _

[32] Carol Goforth, *Transactional Skills Training Across the Curriculum*, 66 J. LEGAL EDUC. 904, 917 (2017)

[33] 5 MARGARET N. KNIFFIN, CORBIN ON CONTRACTS § 24.7, at 36 (Joseph M. Perillo ed., Lexis rev. ed. 1998).

[34] MITCHEL, at 113.

[35] See primer, at fn 225 and citations there.

Settlement

Some supporters of contextualism dispute the claim that contextualism increases litigation costs.[36] Others suggest that the possibility of settlement means this argument of little importance. On the contrary, because textualism reduces accuracy in interpretation it "makes it immensely difficult for parties to predict the results of ambiguity decisions in textualist jurisdictions" and "[s]uch uncertainty increases the number of lawsuits and hinders settlements."[37] Thus, as Shawn Bayern suggested, if accuracy in interpretation has "any effect at all" on the parties' willingness to settle then "more precision in interpretive results should increase the likelihood of settlement", and "[i]f lawsuits are not brought, parties do not experience the litigation costs that Schwartz and Scott's textualist argument aims to permit to them avoid".[38] A similar conclusion was suggested by Albert Choi and George Triantis who, when attempting to explain why sophisticated parties' draft vague material adverse change (MAC) clauses in merger agreements, argued that: "litigation costs may in fact never be incurred when either they encourage settlement" and that "vague clauses . . . facilitate settlement of disputes."[39]

B. The Contractual Environment

Gilson, Sabel, and Scott offer a somewhat different perspective on how to determine majoritarian preferences. In line with the transaction cost analysis just

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[36] *See* Cohen, at 134 (arguing that the more complete and complex agreement may lead to more frequent litigation); Joshua M. Silverstein, *Using the West Key Number System as a Data Collection and Coding Device for Empirical Legal Scholarship: Demonstrating the Method via a Study of Contract Interpretation*, 34 J.L. & COM. 203 (2016) (suggesting that a party seeking strict adherence with a complete agreement might motivate the other party to be more litigant).

[37] Primer, near fn 250-251.

[38] Shawn Bayern, *Contract Meta-Interpretation*, 49 U.C. DAVIS L. REV. 1097, fn 97 (2016).

[39] Albert Choi & George Triantis, *Strategic Vagueness in Contract Design: The Case of Corporate Acquisitions*, 119 YALE L. J. 848 (2010).

discussed, the analysis views the parties as choosing between investing in ex-ante drafting or ex-post adjudication.[40]

Per Gilson and his colleagues, investment in drafting implies that parties prefer textualism, because the creation of a more complete agreement suggests that fewer external source of interpretation are needed. Conversely, a decision to invest in adjudication rather than drafting means that the parties wish to expand the amount of evidence courts consider when interpreting their agreement. Thus, the choice of whether to invest ex-ante or ex-post correlates with the parties' preferred style of interpretation.[41]

The analysis continues by identifying two factors in the contractual environment likely to determine the parties' choice: contractual uncertainty; and market thickness. Contractual uncertainty reflects the possibility that "exogenous events that may affect the parties' obligations are unknown or cannot be estimated probabilistically".[42] Where uncertainty is low, drafting complete agreements is relatively cheap, and parties can draft (near) complete contingent contracts, "integrating the relevant context into a complete, formal agreement".[43]

But, "the greater the uncertainty associated with a contract-the more difficult for the contracting parties to specify all the future states of the world in which the contract will have to be performed and the actions to be taken in each of those states".[44] Thus, parties are unable - or would find it very costly - to drat a complete contingent contract and would prefer shifting costs from ex-ante drafting to ex-post litigation. That is, they would prefer contextualism. In practice, Gilson and his colleagues claim, parties make this preference known by using "general standards that require a context for interpretation".[45]

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41 Gilson et al, at 56.

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44 Gilson et al, at 56.

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Market thickness affects the parties' choice in a more indirect way. Because of economies of scale, Gilson and his colleagues argue, thick markets are more likely to produce "specialized collective regimes to resolve [the parties'] disputes or address common risks", such as trade associations, and the "the parties delegate to the collective effort the task of providing the context relevant to a dispute, and the collective itself is legally sophisticated."[46]

Thus, in thick markets where trade associations exists, parties "are able to standardize the context and develop modes of interpretation that permit these standard understandings to be updated periodically, in effect endogenizing through design the process that Corbin sought through adjudication." Expert tribunals, that is, allow the parties to enjoy the benefits of relying on context by relying on the tribunal own expertize and without needing to provide it with external evidence.[47]

Stated differently, trade associations expand the parties' choice set and allow them to decide between investing in ex-ante drafting, ex-post adjudication, or ex-ante investment in creating and maintaining expert tribunals. In thick markets, economies of scale suggest that most parties would prefer the later alternative.

That parties actually prefer to invest in expert tribunals, Gilson and his colleagues argue, is supported by Lisa Bernstein's empirical work,[48] finding that "collective regimes of this kind frequently arise through private organization, and disputes arising within them can be disposed of by private arbitration."[49] It also coincide with Katz's argument, that a main source of variance in interpretation in generalist courts comes from differences in judges' background, expertise, and

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48 *See*: Lisa Bernstein, *Merchant Law in a Merchant Court: Rethinking the Code's Search for Immanent Business Norms*, 144 U. PA. L. REV. 1765, 1771-77 (1996); *Lisa Bernstein, Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry*, 21 J. LEG. STUD. 115, 119-30 (1992); Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation through Rules, Norms, and Institutions*, 99 MICH. L. REV. 1724, 1745-54 (2001).

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knowledge. Expert tribunals, on the other hand, usually employ adjudicators who are industry insiders and who therefore share similar expertize and background, thereby greatly reducing variance in the interpretive outcome.[50]

C. The Type of Disputed Term

Another twist in the plot of determining parties' preferences comes from Omri Ben-Shahar. An implicit assumption in the discussion of parties' preferences, Ben-Shahar argues, is that all contractual terms affect the parties' joint surplus. Accordingly, the literature assumes that sophisticated parties would choose whatever term maximizes their joint surplus, and then divide that surplus according to their (exogenous) bargaining power.[51]

In fact, however, not all terms share this characteristic. Instead, some terms are purely distributive.[52] For example, when negotiating the price term, the parties decide on how the contractual surplus will be divided between them, but whatever price they would agree to would not affect their *joint* surplus.[53]

Parties, therefore, treat purely distributive terms differently than they treat surplus maximizing terms. Where the parties negotiate surplus maximizing terms they would likely choose the efficient term. But, when terms do not affect the joint surplus, such option is simply irrelevant. Instead, for purely distributive terms, parties engage in dividing the joint surplus according to their relative bargaining power.

Parties may not fully or clearly address purely distributive terms, Ben-Shahar argues, to allow for greater flexibility, save on drafting costs, and reduce the "psychic burdens . . . [of] weaker parties [having to] endure humiliation when the

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[50] Katz (2004).

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stronger party openly dictates a one-sided term".[54] When they do, he claims, could should interpret or supplement the missing term with one that reflects the parties' bargaining power.[55]

Though determining the parties' relative bargaining power may sometimes be relatively easy – as in when one party clearly dictates the terms of the transaction – in many other instances it requires going beyond the four corners of the agreement. That is, courts would need to inquire into the context of the transactions, including: the parties' alternative to contracting with this particular party; the structure of the market; and various other factors that may be relevant to determining the parties' relative bargaining power.[56]

Following Ben-Shahar, then, it would seem that most sophisticated parties' would prefer a contextualist style of interpretation when the disputed term is a purely distributive one.

D. Rationality, Risk Neutrality, and Strategic Behavior

Finally, and before we turn to our analysis, there are several factors recognized in the literature as shaping the parties' preferences, but which we exclude from our analysis. In doing this, we mostly accept conventional economist wisdom that such factors are irrelevant to the analysis of bespoken agreements between sophisticated commercial parties.[57]

First, a long strand of behavioral-economic literature has questioned the rationality of contractual parties, including those acting in the commercial context.[58] We do not dispute that irrationality exists or suggests that it is confined

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[54] Ben-Shahar, at 412.

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[56] 408-410

[57] Though one of us remains more convinced by such wisdom than the other.

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to the non-commercial sphere. Nevertheless, when it comes to commercial actors who employ sophisticated decision making mechanisms, enjoy extensive legal counsel, and are subject to the disciplinary powers of the market, irrationality is usually believed to be less frequent.[59] Thus, though some sophisticated actors may still act irrationally, such instances are unlikely to affect the determination of *majoritarian* preferences.

Commentators have also suggested that commercial parties may not be risk neutral. For example, Shawn Bayern suggested that firms may be risk averse when litigation "involve large sums that serve potentially as shocks and that might have a public dimension or at least extend in importance beyond a particular dispute."[60] Schwartz and Scott too suggest that firm might exhibit risk-averse behavior when "a correct interpretation is particularly important to them", but argue that "[f]ew business contracts have this 'bet the ranch' character".[61] Thus, in most cases and as long as commercial entities are assumed to be profit-maximizing, risk neutrality remains the more plausible assumption.[62]

Lastly, Bayern has further argued that commercial parties may seek to engage in strategic or opportunistic behavior.[63] However, as Schwartz and Scott's have claimed, as long as courts are unbiased a party who behaves strategically faces a significant risk of being found in breach and liable for damages. Thus, combined with the (possible) reputational harm that accompanies strategic behavior, risk-neutral parties would only cheat in relatively rare instances and when success is highly profitable.[64]

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[60] *See* Shawn J. Bayern, *Rational Ignorance, Rational Closed-Mindedness, and Modern Economic Formalism in Contract Law*, 97 CAL. L. REV. 943, 953 n.31 (2009). See also: James W. Bowers, *Murphy's Law and the Elementary Theory of Contract Interpretation: A Response to Schwartz and Scott*, 57 RUTGERS L. REV. 587, 598 (2005).

[61] Redux, at 947-48.

[62] Redux, at 947-48.

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[64] Redux, at 948-952.

III. WHAT INTERPRETIVE STYLE MOST PARTIES PREFER?

It is now time to turn to our proposed analysis of parties' preference of interpretation style. We begin, in Sections A, by explaining how accuracy in interpretation may increase the parties joint surplus and therefore why parties value accuracy. In Section B show how accuracy explains why, how, and when the factors discussed in Part II effect the parties' preferences.

A. The Significance of Variance in Court Interpretation

Let us first set-out the assumptions on which our analysis is premised. In this Section we discuss the value of accuracy in the interpretation of surplus maximizing terms in commercial contracts between sophisticated parties. In the Next Section, we expand our analysis by relaxing some of these assumptions. We further assume that, with one exception to be discussed in sub-Section 3, for any negotiated term there is one solution that maximizes the parties' joint surplus and the parties shared intention is that that solution would be enforced. Lastly, we assume that the cost of drafting complete, clear and unambiguous terms is, at least sometimes, prohibitive.

With the above assumption in mind, our main argument can be briefly stated as follows: whenever courts interpret the parties' agreement, any interpretation that fails to enforce the parties' shared intentions will, by definition, reduce their joint surplus. Stated differently, where the parties use unclear or ambiguous term and courts subsequently interpret the contract other than as intended by the parties, the parties' joint surplus will diminish. Thus, greater accuracy increases the parties' expected joint surplus.

In what follows we expend the analysis of our main argument and show that accuracy may also affect the contractual price and incentivize parties to adopt inefficient terms.

The Effect of Variance in Interpretation on Joint Surplus

To illustrate the value of accuracy, we begin with a simplified model of a contract between a buyer and a seller. As mentioned, we assume that: (a) the cost of drafting an unambiguous term is prohibitive; (b) courts may interpret the term in various ways; (c) courts are unbiased – that is, correct on average; and (d) the

parties know the distribution of possible interpretations (i.e., the probability of each possible interpretation).

The parties negotiate a term i relating to the seller's obligation. We denote the seller's performance cost $c(i)$ and the buyer's valuation $v(i)$. Accordingly, the parties' joint surplus (s(i)) reflects the difference between the buyer's valuation and the cost of performance, so that: $s(i) = v(i) - c(i)$. We further assume that the seller's costs and the buyer's valuation are monotonously increasing in i, meaning any interpretation that increases the buyer's valuation also increases the seller's costs. Lastly, we assume that the parties agree on the optimal term (i^*).[65]

To see the value of accuracy, let us first consider the parties' expected joint surplus, if courts always interpret the agreement as intended by the parties. Recall that, when courts enforce the parties' intended meaning of the term, their joint surplus is maximized and equals $s(i^*)$. Accordingly, when variance in interpretation is zero – that is, when court always enforce the interpretation intended by the parties – their expected joint surplus equals $s(i^*)$ as well.

Now, consider the effect of inaccuracy. When courts' interpretation varies, the expected joint surplus equals the weighted mean of the surplus from each possible interpretation in the interpretation space. This can be expressed as:

$$E[s(i)] = \int_{i^-}^{i^+} g(i)s(i)\,di$$

where i^- and i^+ are the lower and upper bound of possible judicial interpretations (respectively), and g is the probability density function of all interpretations between (and including) i^- and i^+. Because, by assumption, any interpretation other than i^* produces a surplus lower than the optimal surplus s(i^*), it must be that $s(i^*) > \int_{i^-}^{i^+} g(i)s(i)\,di$, meaning that greater variance in interpretation - that is, less accuracy – reduces the parties' joint surplus.

To illustrate, consider the following example.

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[65] To ensure that the parties have a unique optimal interpretation, we assume that the cost and valuation functions are twice differentiable, and that $c''(i) \geq 0$ while $v''(i) < 0$.

Example 1. *Specific Adjustments*. Buyer wishes to buy a machine to be installed in her factory. Seller offers three types of machines: (i) an already produced standard machine (off-the-shelf); (ii) an off-the-shelf machine customized to the Buyer's needs; and (iii) a custom-made machine built to Buyer's particular specifications. The cost and value of each is detailed in the following Table 2.

Table 1. Costs and valuations of diffarent machine types

Machine type	*Performance Costs*	*Buyer's valuation*	*Joint Surplus*
Off-the-shelf	0	50	50
Adjusted	50	150	100
Costume-made	150	200	50

From Table 1 it follows that choosing a customized off-the-shelf machine would maximize the parties' joint surplus and we assume that they agree as such. It further follows that, if courts' interpretation is always accurate, the parties' expected joint surplus is 100. But, where courts interpretation varies, the parties expected is decreased even if courts remain unbiased. For example, if there is a .5 probability that courts would enforce the correct interpretation, and a .25 probability they would enforce each of the two other possible interpretations, then the parties' expected surplus is only 75.[66]

The example illustrates our general observation, that greater accuracy increases the parties' joint-surplus and therefore, other things being equal, sophisticated parties will prefer an interpretive style that increases accuracy. More specifically, if contextualism increases both accuracy and transaction costs (including ex-post litigation costs), sophisticated parties would prefer contextualism as long as the eventual increase in their expected joint surplus outweighs the expected increase in transaction costs. Thus, in Example 1, if contextualism ensures accuracy in

[66] $(100)\frac{1}{2} + (50)\frac{1}{4} + (50)\frac{1}{4} = 75.$

interpretation, most parties will prefer contextualism as long as the additional costs associated with it are 25 or less.

Sophisticated parties value accuracy, but how much they value accuracy depends on the extent which relatively minor and therefore more probable deviations from their intended meaning would reduce the joint surplus.[67] To illustrate, consider Example 2 in which two types of agreements exist: type A contracts, in which probable (i.e., small) divergence from the parties' intended interpretation significantly decreases the joint surplus; and type B contracts, where probable divergence only slightly decreases the joint surplus.

Example 2. *Choice of manufacturer*. Buyer Considers buying a customized off-the-shelf machine from either Seller A or Seller B. The customized machine may include one or more of a possible 3 adjustment, and both sellers offer the buyer the same alternatives, as detailed in following Tables.

Tables 2 and 3. Costs and valuations for type A and type B contracts

Seller A (Type A Contracts)

Machine type	*Performance Costs*	*Buyer's valuation*	*Joint Surplus*
Off-the-shelf	0	15	15
1 *adjustment*	45	70	25
2 *adjustments*	50	100	50
3 *adjustments*	95	120	25
Costume-made	160	175	15

[67] That is, whether the joint surplus curve is steep or flat around the optimal interpretation (i^*).

Seller B (Type B Contracts)

Machine type	*Performance Costs*	*Buyer's valuation*	*Joint Surplus*
Off-the-shelf	0	15	15
1 *adjustment*	45	90	45
2 *adjustments*	50	100	50
3 *adjustments*	95	140	45
Costume-made	160	175	15

Whether the buyer contracts with Seller A or with Seller B, the optimal agreement includes two adjustments, imposes similar costs on Sellers and provides the same value for Buyer. Thus, if interpretation is always accurate, Buyer would be indifferent between the two sellers. The conclusion is different where courts may err in their interpretation. Assuming courts are far more likely to err in the number of adjustments agreed upon, rather than on the type the parties intended to be sold, Buyer would prefer Seller B because the more probable errors are less costly.

The above conclusion illustrates the value of accuracy for different types of contracts. That is, though buyers may often choose between different sellers, sellers acting in the same market might offer transactions that have a similar cost-benefit structure. When all sellers offer Type A contract, accuracy gains greater importance and, other things being equal, most parties would prefer to pay for increased accuracy. Conversely, when all sellers offer Type B contract, accuracy is less valuable, and parties are more likely to prefer textualism for its lower litigation costs.

In addition to its effect on the parties' joint surplus, accuracy – or the lack thereof – may also affect the contractual price and incentivize the parties to adopt inefficient terms. We explore these effects in the following sub-sections.

The Effect of Variance in Interpretation on the Contractual Price

Sophisticated parties are usually assumed to set the contractual price according to their relative bargaining power. That is, the price term reflect the parties' choice

of how to divide the contractual surplus.[68] Thus, for example where the parties' bargaining power is equal, each receives half of the joint surplus.[69] But, this conclusion only holds if the parties are certain about their expected costs and benefits from the agreement – that is, when they anticipate courts' interpretation to be accurate. Where interpretation may be inaccurate, the parties would still choose the price that reflects their relative bargaining power, but it will be set at halfway between the seller's expected costs and the buyer's expected value.

Consider the following variation to Example 1.

Table 4. Changes in contractual price

Machine type	*Performance Costs*	*Buyer's valuation*	*Joint Surplus*
Off-the-shelf	0	40	40
Adjusted	100	200	100
Costume-made	320	360	40

In the example, if courts' interpretation is always accurate, the parties would set the price at halfway between Seller's costs (100) and Buyer's valuation (200) – that is, at 150. But, when interpretation may vary, the price may subsequently change. For instance, if there is a .5 probability that courts would enforce the intended meaning of the term, and a .25 probability they would enforce one of the other two alternative, Seller's expected costs increase to 140 while Buyer's expected valuation remains 200. Thus, given their equal bargaining powers, the parties will set the price at 170.

The Effect of Variance over the Choice of Contractual Terms

A third and final effect of (in)accuracy is to incentivize the parties to agree on inefficient terms. This will occur when there is an asymmetry in the effect of courts'

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[69] This is a standard assumption. The results hold for any division of the surplus. We also assume that the parties' bargaining power is unaffected by the accuracy of later interpretation of contract terms.

errors. That is, for example when an error in favor of the buyer reduces the joint surplus much more than would a similar error in favor of the seller.

Consider the agreement for the sale of a machine once more, and assume that the optimal delivery time is ten weeks. Assume also that, if courts adopt a textualist style of interpretation, they might interpret the agreement as requiring delivery within eight, ten, or twelve weeks and that the loss in joint surplus from delivery in eight weeks is greater than the lost from late delivery. If the asymmetry is sufficiently great, the parties may choose a longer than optimal delivery time.

For convenience, we can divide the errors in interpretation into mundane mistakes and catastrophic mistakes. Accordingly, our argument suggests that parties might choose inefficient terms to avoid catastrophic mistakes. To illustrate, consider the following table showing costs and values associated with various delivery times.

Table 5. Changes in the contractual term

Delivery time	***Seller's Costs***	***Value for Buyer***	***Joint Surplus***
6 weeks	*160*	*160*	*0*
10 weeks	*60*	*120*	*60*
14 weeks	*30*	*80*	*50*
18 weeks	*0*	*40*	*40*

Let us assume that, when choosing a delivery time, the parties know the courts would enforce their intended interpretation with probability .5 and the two interpretations on either side of it with an equal probability of .25. Where this is the case, the parties would maximize their expected joint surplus by agreeing on delivery in 14 weeks rather than by agreeing on the optimal term of delivery in 10 weeks.[70]

The parties may also adopt a different strategy to deal with the risk of catastrophic mistakes. Instead of choosing a less efficient term of the same type,

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parties might adopt a completely different type of contractual term, which is less efficient but more explicit and less prone to mistakes in interpretation. For example, when the costs of performance depend on future changes in the costs of labor and of materials, parties might wish to set the obligations of the seller according to her actual performance costs. The parties might fear that a complicated term, which introduces alterations according to changes in multiple markets, might later be open to many interpretations. Instead, the parties might opt to link their obligations to a published index, ensuring low variance in later interpretations at the cost of having a less efficient mechanism to deal with changes in the market.[71]

B. Expanding the Model: Distributive Terms, Settlements, and Renegotiations

Thus far we have explored the value of interpretation assuming that terms are surplus maximizing, parties' cannot settle, and the contractual environment is unchanging. In this part we relax these assumptions, to show how accuracy explains the different factors identified in the literature as effecting the parties' preferences.

First, we show how accuracy explains the distinction between surplus maximizing and purely distributive terms. We then turn to the relation between accuracy and the transaction costs the parties are facing. Lastly, we explain the relation between accuracy and the contractual environment

Accuracy in the Interpretation and Purely Distributive Terms

Some terms are mainly designed to divide the surplus between the parties and do not, for the most part, affect the joint surplus.[72] The contractual price is the paradigmatic example of a surplus dividing term, but it is not the only example.

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Any price adjustment clause can be viewed as a term primarily concerned with the division of the surplus.[73]

In long-term and complicated transactions, the parties may wish to incorporate flexible or sophisticated pricing mechanisms, which later may be open to interpretation.[74] The parties, however, may be indifferent to variance in the interpretation of these terms. As long as courts choose, on average, the interpretation that best reflects the parties' division of the surplus, risk-neutral parties will be indifferent to departures from the correct interpretation in particular cases. This observation suggests that commercial, risk-neutral parties would generally prefer an interpretive rule that minimizes evidentiary costs, even at the expanse of higher variance.

As we have discussed earlier, Ben-Shahar argued that in incomplete contracts, where gaps involve only surplus-dividing issues, default rules should mimic the hypothetical agreement between the parties, according to their bargaining power.[75] Ben-Shahar's argument is very compelling – if the gap-filling mechanism follows the parties' bargaining power, he argues, the parties do not have to reach an agreement. They can save transaction costs, knowing that the mechanism will preserve their bargaining position and lead to a similar result as they would have agreed on had they negotiated the term.

The same reasoning cannot be easily applied to the interpretation of surplus-dividing terms. Whenever the parties agree on a term, trying to interpret it according to the perceived bargaining power can distort the parties preferred allocation of the contractual surplus. Think of two parties with unequal bargaining power that agree on an unclear term. For example, assume that in a contract between Seller and Buyer, the cost of performance is 0 and the valuation for Buyer is 100. Further assume that seller holds superior bargaining position, so the parties agree on a price of 70 (leaving Seller with 70% of the joint surplus). If the court's interpretation is similarly biased, using the parties bargaining power as a guide, it

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might systematically overestimate the price. In this case, if the interpretation space is unbiased, so that on average courts consider the same range of prices above and below 70, leaning toward the interpretation favorable to the seller, who holds a better bargaining position, might result in an expected price in excess of 70.

Furthermore, determining the parties' relative bargaining power requires the court to examine evidence, which increases litigation costs. Evidentiary costs might also affect the desirability of bargain-mimicking as a gap-filling mechanism. If a contract contains several surplus-dividing terms, the parties can agree on one term (such as the price), and have the court fill the rest of the terms using any predetermined rule. Consider for example a sale contract that has two purely distributive terms – a price term and a term that assigns tax obligations from the sale. If the parties know the default rule regarding the assignment of tax obligations, they can always allocate the surplus using the price term. For example, if under the default the taxes are payed in full by the seller, the parties have no reason to change the default in order to divide the surplus according to their bargaining power. Instead they will just increase the price.

In other words, the parties must only agree on one purely distributive term, and adopt the default regarding all other distributive terms, as long as the default rules are clear and cheap. Since bargain-mimicking rule requires evidence it is both unclear and costly, making it less likely to be a majoritarian default.

Settlement and Renegotiations

Parties can often settle their differences before incurring the costs of litigations. Other times, parties can mitigate the costs of court errors by renegotiating the terms of their agreement after trial. Interestingly, the option of settling before trial and renegotiating the terms after trial may have opposite effects on the parties' preferred style of interpretation.

Let us start by examining the possibility of pre-trial settlements. Simply put, if parties agree on the enforcement of the correct interpretation before trial, they maximize the surplus from the transaction without incurring litigation costs. This observation alone, however, fails to explain why sometimes risk-neutral sophisticated parties fail to settle. This can occur when parties hold private

information, leading to different estimations of the trial's outcome.[76] Alternatively, the parties will fail to settle if their bargaining costs are higher than their expected costs of litigation. In these circumstances, greater litigation costs increase the likelihood that the parties will settle. If the interpretive style allows the parties to produce more evidence, litigation costs will likely increase, inducing the parties to settle.

There is another reason higher accuracy encourages settlement. Recall that sophisticated parties fail to settle because they hold different (private) information that effects their estimations regarding the legal outcome. Lower variance in courts' decisions is likely to reduce variance in parties' private estimation, increasing the probability that they would successfully negotiate a settlement.

Similarly, after the trial is over and the court decided on the interpretation of the disputed term, the parties can comply with the court's decision or renegotiate the terms. Renegotiations affect the division of surplus between the parties, but not the surplus. For example, assume that the parties have equal bargaining power and that if the correct interpretation is enforced, the seller's cost is 20, and the parties' joint surplus is 10. Following these assumptions, the parties will set the contractual price at 25. Now, assume that a dispute arose and that the court has erroneously interpreted the disputed term so that the seller's cost is reduced to 16 and the joint surplus to 4. The parties, as mentioned, would likely renegotiate to reinstate the optimal term. Assuming that the parties' bargaining power remains equal, the buyer will be willing to pay, and the seller will be willing to accept 7 to return to the optimal term.[77] Thus, the court error led to a loss of 2 to the buyer and a gain of 12 to the seller.

If the parties can expect renegotiations after the errors in interpretation, they can always reinstate the optimal term. Moreover, errors also do not affect each parties' private expected benefit from the contract. If courts are unbiased and the parties know the effect of the courts' mistakes on their expected benefit, they can set the contractual price to offset any expected ex-post distortion. Thus, when

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[77] This reflects the additional costs the to the seller and half of the additional surplus.

renegotiations are costless, risk-neutral parties would be indifferent to variance in the court's interpretation. That means that renegotiations reduce the value of accuracy in interpretation.

Thus far, we have seen that the parties may adopt two strategies to ensure that their joint surplus will be maximized: pre-trial settlements and post-trial renegotiations. We also saw that when parties consider the possibility of post-trial renegotiations, they will prefer to reduce litigation costs, discounting variance. In contrast, the possibility of a pre-trial settlement suggests that contextualism would be the style of interpretation most parties would prefer, as it allows for more evidence and arguably leads to lower variance. Thus, to determine the majoritarian default interpretive rule, the question is which of the two strategies most parties would prefer.

The answer, we suggest, is that most parties find pre-trial settlements to be the superior alternative. In particular, for the parties to reach the post-trial renegotiations stage, they must first incur litigation costs. Thus, as long as the expected costs of litigation and post-trial negotiation (combined) are higher than the expected costs of negotiating a pre-trial settlement, the parties would prefer a contextualist interpretive style. Though we have no empirical evidence to that effect, we believe it stands to reason that, in the usual case, the cost of settlement negotiations would be lower than the combined costs of litigation and post-trial renegotiations and that therefore, from this perspective, the majoritarian default rule, in regards to surplus-enhancing terms is a contextualist one.

IV. CONCLUSION

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