

Reconsidering Contractual Liability and the Incentive to Reveal Information

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In an earlier work, Professors Lucian Arye Bebchuk and Steven Shavell analyzed how the legal rules governing contractual liability affect the transfer of information between the parties to a contract. In particular, they showed how limitations on contractual liability might lead high-valuation buyers to reveal their valuation of performance, and they identified the circumstances under which such limitations on liability are and are not socially desirable. In an article published in this issue of the Stanford Law Review, Professor Barry E. Adler develops a critique of Professors Bebchuk and Shavell's analysis, as well as that of Professors Ian Ayres and Robert Gertner, who independently argued that contractual rules can facilitate transfers of information. Professors Bebchuk and Shavell reconsider here the subject of contractual liability and the revelation of information and respond to Professor Adler's critique. Professors Bebchuk and Shavell find Professor Adler's model to be a natural extension of theirs rather than a departure from it. Their reexamination leads to the conclusion that the informational effects that their work analyzed are important to take into account in designing contract rules.

I. CONTRACTUAL LIABILITY AND THE REVELATION OF INFORMATION

In an earlier article,¹ we analyzed how the rules governing contractual liability—and, in particular, the rule developed in the famous case of *Hadley v. Baxendale*²—might spur desirable transfers of information when contracts are formed. We analyzed the nature of the informational advantage that the

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1. See Lucian Arye Bebchuk & Steven Shavell, *Information and the Scope of Liability for Breach of Contract: The Rule of Hadley v. Baxendale*, 7 J.L. ECON. & ORG. 284 (1991).

The possibility that the rule in *Hadley* might lead to informational transfers was also noted in an earlier work by John H. Barton, *The Economic Basis of Damages for Breach of Contract*, 1 J. LEGAL STUD. 277, 295-96 (1972), and in RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* § 4.9, at 141 (5th ed. 1998). But these writers did not develop their observations.

2. 156 Eng. Rep. 145 (Ex. Ch. 1854).

Hadley rule might possess, and we identified the circumstances under which this rule is and is not desirable.

Ian Ayres and Robert Gertner, working independently of us, also examined how the *Hadley* rule might provide incentives to transfer information.³ Unlike our article, theirs did not analyze the possibility that the *Hadley* rule would be undesirable and did not identify the exact informational advantage of the rule. But, like us, they suggested that the *Hadley* rule might serve a beneficial role in inducing buyers to reveal information to sellers.

In an interesting article published in this issue of the *Stanford Law Review*,⁴ Barry Adler takes issue with our analysis as well as that of Ayres and Gertner. He argues that we overlooked an important factor that can significantly affect the desirability of the *Hadley* rule. Furthermore, because the presence of this factor might make it more difficult to identify when the *Hadley* rule would and would not be desirable, he suggests that lawmakers should treat skeptically the type of considerations on which our work has focused. In this response, we examine whether his criticism of our work is warranted and, ultimately, suggest that it is not.

The case of *Hadley*, and the rule that it established, are quite familiar to students of contract law. In that case, Hadley, a mill owner, engaged Baxendale, a carrier, to transport a broken engine shaft to another city by a certain date. The value to Hadley of performance was much greater than ordinary because the broken shaft was to serve as a model for a new one without which his mill could not operate. But Hadley did not inform Baxendale of his high valuation of performance. When Baxendale failed to deliver on time and Hadley sued, the court declined to grant Hadley damages equal to the large losses he suffered as a result of the failure to perform.⁵ The court established that liability should be limited to losses "arising . . . according to the usual course of things," or that "may reasonably be supposed to have been in the contemplation of both parties, at the time they made the contract, as the probable result of the breach of it."⁶ For Baxendale to be responsible for Hadley's lost profits, the court stated that Hadley had to have communicated his particular circumstances to Baxendale at the time that the contract

3. See Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87 (1989). The Ayres-Gertner article and our article (the first draft of which was presented at the University of Pennsylvania in 1983) were developed independently of each other. We exchanged our manuscripts in 1989 and the Ayres-Gertner article cites our 1983 draft. See Ayres & Gertner, *supra*, at 101, 108. Both articles were submitted for publication at the same time, but due to the length of the publication process at the *Journal of Law, Economics & Organization*, ours came out in 1991, whereas the Ayres-Gertner article came out in 1989.

4. See Barry E. Adler, *The Questionable Ascent of Hadley v. Baxendale*, 51 STAN. L. REV. 1547 (1999).

5. See 156 Eng. Rep. at 145-52.

6. *Id.* at 151.

was made.⁷ This limitation on liability for breach of contract to the ordinary, foreseeable level of losses, unless the promisee had informed the promisor otherwise, has become generally accepted in the common law world.⁸

Our analysis sought to compare the merits of the *Hadley* limited liability rule with a rule under which sellers' liability is unlimited. Three of the basic points that we established are worth noting here. First, as Ayres and Gertner also suggest,⁹ it might sometimes be desirable for sellers to be able to distinguish between buyers with high valuation of performance and those with low valuation.¹⁰ Such separation might be desirable when different levels of precautions (intended to reduce the likelihood of breach) are appropriate for low and for high-valuation buyers.

A second insight that our analysis provided concerned the specific nature of the advantage that the *Hadley* rule might have in facilitating a transfer of information that would enable separation between low- and high-valuation buyers.¹¹ Such a separation might also take place under a rule of unlimited liability if low-valuation buyers identify themselves—or, equivalently, sign limited liability contracts—in order to obtain lower contract prices. Such opting by low-valuation buyers out of an unlimited liability rule would also have the consequence of achieving separation between low- and high-valuation buyers (and create differing levels of precautions for the two groups). In examining the potential benefits of the *Hadley* rule, Ayres and Gertner focussed on the case in which such opting out by low-valuation buyers will not occur because it would be too costly. In contrast, we analyzed also the case in which such opting out would not be prohibitively costly and showed that the *Hadley* rule might offer an informational advantage even in such a case.

Specifically, we showed that, even when separation would occur under both rules, the *Hadley* limited liability rule will have the advantage that it can produce separation in the way that is least costly. Separation under the unlimited liability rule requires communication to take place, and communication costs to be incurred, for all low-valuation buyers. In contrast, under the limited liability rule, separation is accomplished by communication taking place, and communication costs being incurred, only for high-valuation buyers. Thus, in situations in which high-valuation buyers are unusual (as was the case in *Hadley*), the advantage of the *Hadley* rule is that it requires communication only by the small minority of high-valuation buyers rather than by the large majority of low-valuation buyers.

7. See *id.*

8. See, e.g., JOHN D. CALAMARI & JOSEPH M. PERILLO, *THE LAW OF CONTRACTS* § 14-5 (4th ed. 1998); 3 E. ALLAN FARNSWORTH, *FARNSWORTH ON CONTRACTS* § 12.14 (1990).

9. See Ayres & Gertner, *supra* note 3, at 101-02.

10. See Bebchuk & Shavell, *supra* note 1, at 285-86, 294-95.

11. See *id.* at 286, 291-92, 301-03.

Third, while our analysis identified a benefit of the *Hadley* rule, it also identified a cost.¹² While Ayres and Gertner focussed on the possible benefits of the *Hadley* rule, we also analyzed the potential costs of the rule and identified the circumstances under which it is and is not desirable. In particular, we showed that the *Hadley* rule might be inferior in situations in which separation of buyers' types is too costly to occur. In such cases, we showed, the outcome under the unlimited liability rule would be superior to that under the *Hadley* limited liability rule. The reasoning is that, without separation, sellers would use a uniform level of precautions for all buyers. Under the *Hadley* limited liability rule, sellers would uniformly use the level of precautions appropriate for low-valuation buyers. In contrast, under the unlimited liability rule, sellers would choose as their uniform level an intermediate level of precautions—which would be better for the pool of both low- and high-valuation buyers.

In his article, Adler introduces an additional factor into our analysis. He assumes that, in the event of breach, buyers are not certain to suffer damages, and, furthermore, that high-valuation buyers are not only expected to have higher damages when they suffer damages but also are more likely to suffer damages.¹³ Introducing this possibility, he argues, might discourage high-valuation buyers from revealing themselves under the *Hadley* rule and might make the *Hadley* rule undesirable.¹⁴ Moreover, he argues that this possibility makes it much more difficult to determine whether the *Hadley* rule is desirable, and he therefore cautions against taking into account in lawmaking the considerations we identified.¹⁵

Part II suggests that Adler's nice contribution should be regarded as a natural extension of our analysis, rather than a sharp departure from it. Adler's model largely follows ours and extends it in one way, by allowing for the level of buyers' losses from breach to be probabilistic. Also, as noted above, our analysis identified circumstances in which the *Hadley* rule is undesirable. Adler's conclusion—that the *Hadley* rule might sometimes be undesirable—is similar to ours (though it contrasts with that of Ayres and Gertner). Indeed, the reason that the *Hadley* rule might sometimes be undesirable according to Adler's analysis is the *very reason that we identified*—that, when separation of low- and high-valuation buyers does not occur, the unlimited liability rule leads to a more efficient level of uniform precautions. The factor introduced by Adler (of different probabilities of suffering damages by low- and by high-valuation buyers) merely expands somewhat the range of circumstances in which the *Hadley* rule will be undesirable. Thus,

12. See *id.* at 291-92, 301-03.

13. See Adler, *supra* note 4, at 1561-64.

14. See *id.* at 1564-70.

15. See *id.* at 1580-81.

the Adler analysis does not undermine our results but rather offers a useful refinement of them in certain cases.

Part III examines what policy implications can be drawn from Adler's extension of our analysis. First, we question whether Adler's extension significantly affects the set of cases in which unlimited liability is desirable. Although the extension might have implications for the optimal contours of the *Hadley* rule, it does not undermine the desirability of the rule for a significant core of cases. We then question Adler's argument that his extension reveals an inherent indeterminacy, and consequently a lack of practical relevance, of the sort of analysis that we developed. We suggest that Adler's extension and the questions it raises do not imply that such analysis is not relevant to inform lawmaking.¹⁶

II. THE ADLER QUALIFICATION: SHARP DEPARTURE OR NATURAL EXTENSION?

The results of Adler's analysis, we suggest, should be regarded as a natural extension of our results. As we said, the model that Adler employs is essentially the one that we developed, but it includes an additional complicating factor. This factor will be seen to lead to a refinement in our results, not to change them in a significant way.

A. *Our Model for Analyzing Hadley*

To understand how Adler's results and ours relate to one another, it is necessary to describe our model of *Hadley*. The main building blocks of our model are as follows.

We envision a situation in which there are two kinds of buyers: a majority of normal, low-valuation buyers, and a minority of high-valuation buyers. For example, suppose that 95% of buyers place a low value of \$100 on performance (timely delivery) while 5% of the buyers put a high value of \$10,000 on performance.

The probability of nonperformance, that is, of breach, depends on the level of precautions taken by sellers. There is some low level of precautions that is optimal for sellers to take in the event that the buyer places a low valuation on performance; say that the cost of this level of precautions is \$5.¹⁷ There is also some high level of precautions that is optimal for sellers

16. Our reply was written in response to the draft of Adler's article that was accepted for publication. Adler has made changes to the draft in the subsequent process of law review revision, and we offer in a Postscript some brief reactions to these changes.

17. By optimal, we mean the level of precautions that maximizes the expected value of performance net of the costs of precautions. More precisely, let x stand for the level and cost of precautions, $p(x)$ the probability of breach, and L the low valuation. Then the optimal level of precau-

to exercise for buyers who place a high valuation of performance; suppose that the cost of this is \$100.¹⁸

If sellers cannot tell buyers apart, then the level of precautions must of necessity be set at the same, uniform level for all buyers. But because the average level of valuation in a pool including all buyers is a weighted average of the low and high valuations, the optimal level of precautions in this case would be an intermediate or "blended" level. Suppose that in our example this blended level is \$8.¹⁹ Although Ayres and Gertner noted the possibility of such a blended precaution, their analysis proceeded using assumptions under which sellers, when facing the complete pool of buyers, will use the low level of precautions.²⁰ In contrast, our analysis proceeded by assuming that sellers, when facing the complete pool of buyers, will use the intermediate, blended level of precautions. This use of the blended level of precautions plays a critical role in Adler's results.

The valuations of buyers are assumed not to be directly observable by sellers. Thus, for sellers to be able to tell buyers apart, and to use different levels of precautions for different types of buyers, communications between buyers and sellers must take place. And such communications are assumed to involve costs in themselves.

B. *The Potential Benefit of the Hadley Rule*

Using the above framework, we, as well as Adler, determined the comparative merits of the *Hadley* limited liability rule and the unlimited liability rule. We found that the *Hadley* rule might be beneficial when the transfer of information to sellers about buyers' valuations is socially desirable.²¹

Although the transfer of information to sellers involves communication costs, the transfer may be socially desirable because it enables sellers to take tailored precautions for the two types of buyers. That is, the social benefit of communication is that the sellers can exercise a different level of precautions for each group: high precautions for the high-valuation buyers, and low precautions for the low-valuation buyers. Transfer of information to separate low- and high-valuation buyers will be desirable if social benefit exceeds communication costs.

tions for the low-valuation buyers is the x that maximizes $p(x)L - x$. This level of precautions x_L is what the seller and low-valuation buyers would agree to in contractual negotiations.

18. If H denotes the high valuation, then the optimal level of precautions for high-valuation buyers is the x that maximizes $p(x)H - x$. Denote this by x_H .

19. To be specific, let α be the proportion of high-valuation buyers (5% in our example). Then the optimal blended level of precautions is the x that maximizes $p(x)[\alpha H + (1 - \alpha)L] - x$.

20. See Ayres & Gertner, *supra* note 3, at 110.

21. See Bebchuk & Shavell, *supra* note 1, at 289-92, 301-03.

An important point of our analysis was that, when separation of buyers is optimal, it is socially best for communications between buyers and sellers to take place *only* in the minority of cases in which buyers have high valuation. For high-valuation buyers alone to reveal themselves minimizes the costs of enabling sellers to distinguish between the two types of buyers. The majority of low-valuation buyers, who do not communicate their valuations, are known by inference to be low-valuation buyers.

The benefit of the *Hadley* rule is that, when separation between low- and high-valuation buyers is desirable, it will occur, as just described, in the least costly way. For under the *Hadley* rule, communications will take place in the small minority of cases in which buyers have high valuation. Thus, under *Hadley*, high-valuation buyers in our example might be induced to reveal that their valuation is \$10,000 instead of \$100. Once they identify themselves and thereby assure themselves of a payment of \$10,000 in the event of breach, sellers will be induced to take the high level of precautions. To be sure, by revealing their valuations, the high-valuation buyers will be charged a higher price to cover sellers' costs of higher precautions and the risk of having to pay higher compensation in the event of breach. But, because of the efficiency gains produced by higher precautions, high-valuation buyers will tend to want to reveal their valuations despite the consequences for the price they will have to pay.²²

Further, under the *Hadley* rule, low-valuation buyers will remain silent. Because the level of damages is set at the low \$100 level, sellers will use low precautions for buyers who are silent, and sellers will charge accordingly low prices.

C. *The Potential Cost of the Hadley Rule*

As we stated, our analysis identified reasons as to why the *Hadley* rule might be undesirable. In particular, we showed that, when communication enabling sellers to separate buyers will not occur, the *Hadley* rule will be inferior to the rule of unlimited liability.²³ The reason is, on one hand, that the advantage of the *Hadley* rule in inducing communication in the least costly way is then moot. On the other hand, the *Hadley* rule suffers from a disadvantage: When sellers face the entire pool of low- and high-valuation buyers, the unlimited liability rule is superior to the *Hadley* rule because the former rule provides incentives for sellers to choose the optimal, blended level of precautions.

22. We demonstrated in our model that whenever communication is desirable, then the *Hadley* rule will always lead high-valuation buyers to identify themselves. See Bebachuk & Shavell, *supra* note 1, at 298-302. This result does not always hold in the presence of the complication introduced by Adler.

23. See *id.* at 301-03.

To illustrate, suppose in our example that, under the *Hadley* rule, high-valuation buyers will not reveal themselves. In the pooling situation that would result, because sellers' liability would be limited to the \$100 low value of performance, they will set precautions at the low level of \$5.

Now compare this outcome with that resulting under the unlimited liability rule without separation of buyers. Because sellers' liability is unlimited, they will consider their liability expense in the event of breach to be the average valuation of performance in the pool, that is, $95\% \times \$100 + 5\% \times \$10,000$, or \$595 (rather than \$100, as under the *Hadley* rule).²⁴ Consequently, sellers will set the uniform level of precautions at the intermediate level of \$8.²⁵ Because the intermediate level of precautions is the one that is optimal for the pool, this outcome is superior to the one under the *Hadley* rule.

In our analysis, we stressed one important reason that separation might not take place under the *Hadley* rule. Namely, the efficiency advantage from tailored precautions may not be sufficient to induce high-valuation buyers to incur communication costs. Adler introduces another reason that high-valuation buyers might not communicate their valuations under the *Hadley* rule.

D. *Adler's Qualification and Our Results*

Adler supposes that buyers' situations are more complicated than we assumed in our model. Specifically, he assumes that, in the event of breach, low-valuation buyers might or might not suffer damages.²⁶ Further, he assumes that high-valuation buyers not only might incur high damages, but *also* that they have a higher likelihood of suffering normal, low-valuation damages than the low-valuation buyers.²⁷

For example, suppose that, in the event of breach, low-valuation buyers suffer damages at a low level only with probability of 50%; and that, in the event of breach, high-valuation buyers suffer damages of \$10,000 with likelihood 30% and damages of \$100 with likelihood of 70%. As Adler correctly points out, in this more complicated setting, a high-valuation buyer might have less reason to communicate under the *Hadley* rule than in our model.²⁸

The reasoning that explains why this additional difference between low- and high-valuation buyers might deter high-valuation buyers from identify-

24. See text accompanying notes 17 & 18 *supra*.

25. See text accompanying note 19 *supra*.

26. See Adler, *supra* note 4, at 1561-64.

27. See *id.*

28. See *id.* at 1564-70.

ing themselves is as follows: If high-valuation buyers do not communicate their valuation, they will enjoy an implicit price-subsidy from low-valuation buyers. To be sure, if all buyers are silent, they will all pay the same price and will receive at most \$100 in the event of breach. But, whereas low-valuation buyers will obtain this \$100 with only 50% probability, high-valuation buyers will receive the \$100 with certainty. And because the price paid by all buyers will reflect the certain \$100 that sellers will have to pay in the event of breach to high-valuation buyers, the uniform price will reflect an implicit subsidy from low-valuation buyers to high-valuation buyers. Finally, because high-valuation buyers who identify themselves will lose this subsidy, they might be discouraged from doing so.

If high-valuation buyers will not identify themselves under the *Hadley* rule because they would sacrifice their price subsidy, the outcome under *Hadley* would be a pooled one. In a pooled outcome, Adler observes that the uniform level of precautions that is induced under *Hadley* is inferior to that under the unlimited liability rule for the reason that we discussed earlier.²⁹ Again, without separation, the *Hadley* rule produces uniform precautions at the level that is optimal for low-valuation buyers, whereas the unlimited liability rule produces uniform precautions at the level that is optimal for the pool.

The conclusion that Adler derives from his extension is therefore similar in character to ours. From our description, it is evident that his analysis should be regarded mainly as a refinement of the basic model we developed, a refinement that shows that the *Hadley* rule is undesirable in a somewhat wider range of circumstances than we identified.

III. POLICY IMPLICATIONS

We discuss here two types of implications that Adler's analysis might have. We first examine the implications of his analysis for one's conclusions concerning how often the *Hadley* rule is desirable. Reflection on the matter leads us to suggest that the *Hadley* rule is desirable in a significant core of cases. We then turn to Adler's more provocative claim—that, because his extension adds complexity to the analysis of *Hadley*, the considerations that our analysis has put forward will not be very useful to lawmakers.

A. *When and How Should the Hadley Rule Be Employed?*

We have seen that, given Adler's extension, the range of situations under which the *Hadley* rule is desirable is narrower than in the model we considered. The question that is practically important is how often Adler's consid-

29. See Part II.C *supra*.

eration would make the *Hadley* rule undesirable. As we explain, we think that the answer is not very often.

For Adler's consideration to affect the choice of damages rule, it must be that, under *Hadley*, high-valuation buyers would be subsidized by low-valuation buyers, and that their subsidy would be of sufficient magnitude to keep them from identifying themselves.

To begin with, Adler's point is relevant only in fairly special circumstances. For his point to apply, low-valuation buyers and high-valuation buyers must face different probabilities of suffering damages in the event of breach, and in such a manner as to produce an implicit subsidy to high-valuation buyers even though damages are limited under the *Hadley* rule.

Also, even when low-valuation buyers and high-valuation buyers differ in the way Adler assumes, there is an interpretation of the *Hadley* rule that could prevent any subsidization of high-valuation buyers. Suppose that the reason high-valuation buyers would suffer higher damages in the event of breach is that they would bear harm of a different, unusual type. In the *Hadley* case, for example, Hadley's damages were high because he lost profits from cessation of operations in his factory, a type of loss not usually associated with delay in delivery of an engine shaft. The court in *Hadley* excluded damages of this special and unusual type; the court did not exclude damages above some normal monetary limit. If the *Hadley* rule is understood to work as it did in fact in the *Hadley* case, so as to exclude losses arising from unusual categories of loss, then the high-valuation buyers cannot possibly be subsidized by the low-valuation buyers. Thus, Adler's point would be mooted.

Adler discusses the version of the *Hadley* rule that would render his point inapplicable, but says that courts often use other versions of the rule.³⁰ But because lawmakers *could* use the considered version if it is found to be desirable, the use by some courts of other versions should not lead Adler to reject the *Hadley* rule in general. Instead, Adler should just make the recommendation, which should be regarded as a contribution of his analysis, that the considered analysis be employed.

Finally, even when there is subsidization of high-valuation buyers under the *Hadley* rule, this might not undermine the desirability of the *Hadley* rule in the significant area of cases for which our analysis has identified the rule as desirable. For the Adler subsidization to prevent separation under the *Hadley* rule, the subsidization must be large enough to discourage high-valuation buyers from identifying themselves to secure a high level of precautions. The higher the value of performance to high-valuation buyers, the less likely they are to keep silent. When the value of performance to high-

30. See Adler, *supra* note 4, at 1562-64.

valuation buyers is an order of magnitude larger than that of low-valuation buyers, the extent to which a high-valuation buyer might be subsidized if he does not identify himself might well be small relative to the value to him from having an especially high level of precautions. Thus, in cases in which the value of performance to some buyers might be especially high and in which the probability of breach might be significantly affected by precautions—that is, in cases like *Hadley* itself—the *Hadley* rule can be confidently regarded as desirable.

B. *What Sort of Analysis Should Inform Lawmakers?*

When researchers introduce new considerations into the analysis of an issue, the usual conclusion concerns how the analysis of the subject under study should be refined. Adler, however, reaches a conclusion of a different nature. He suggests that, because his extension might sometimes make it difficult to determine the best legal rule, the analysis is of little use for lawmakers.³¹ In our view, this conclusion is not warranted.

In analysis of legal policy, it is often true that what rule is best depends on parameters which lawmakers do not know or can only imperfectly observe. When this is so, the ambiguity resulting from imperfect information about the world hardly implies that the analysis should be treated with strong skepticism. Adler's extension does not suggest to us that the question of determining the desirability of the *Hadley* rule becomes especially difficult to resolve.

Moreover, the very recommendation that Adler makes suffers from informational problems for lawmakers similar to those that he believes to be involved in applying the *Hadley* rule. He suggests pursuing a "traditional" analysis of default rules, choosing the arrangement that the parties would have chosen had they contemplated the contingency at issue in a case.³² Identifying such arrangements is often problematic because they depend on parameters whose values are not known by lawmakers. The pages of law reviews are filled with articles in which writers following the traditional default analysis reach results that are speculative and conjectural.

Indeed, in our view, our analysis of *Hadley* enables one to recommend that rule with greater confidence than researchers are often able to endorse other legal rules in other contexts. As we explained in some detail, it seems that the *Hadley* rule is clearly desirable for cases (such as *Hadley* itself) in which a minority of buyers has valuations of performance that are substantially higher than the valuations of ordinary buyers.

31. *See id.* at 1580-81.

32. Since this reply was written, Adler has moved away from supporting the traditional default analysis. *See* Part IV *infra* (Postscript).

In any event, even if others disagree with our conclusion, there is still good reason for them not to disregard it. Our analysis provides a helpful way of organizing thought about the effect of the *Hadley* rule on the transfer of information about the value of performance and the social costs and benefits of communication of such information.

Finally, we note that it is not entirely obvious how to apply the traditional default analysis recommended by Adler, that of searching for the arrangement that the parties would have chosen had they contemplated the contingency presented. When parties to a contract do not have the same information, the exercise of identifying the arrangement that they would have chosen is not well-defined. The identity of the arrangement the parties would have chosen depends on what the seller is assumed to know about the buyer's valuation. There is no clear, natural answer to this question, raising doubts about the meaning of the alternative that Adler finds appealing.

In sum, in designing the rules governing contractual liability, it is important to take into account their effects on whether and how information will be communicated between contracting parties. Identifying and understanding these effects has been the goal of our analysis, and we welcome Adler's extension of it. We do not accept, however, Adler's view that analyzing these effects is of little relevance to lawmaking. Students of contracts, and lawmakers in this area, would do well to recognize the importance of, and take into account, these effects.

IV. POSTSCRIPT

Our reply was written in response to the draft of Adler's article that was accepted for publication. In the subsequent process of law review revision, Adler has made some changes to which we would like to react briefly. To start with, Adler now suggests that the teachings of the prior analysis are "redoubtable," and that his analysis is a refinement of that preceding analysis and not a rejection of it.³³ We of course welcome this view and agree with it.

As to policy implications, Adler no longer advises that lawmakers avoid taking into account the type of considerations that we identified. Rather, he suggests that lawmakers weight more heavily other considerations.³⁴ As to what lawmakers should do instead, Adler no longer recommends "traditional default analysis," which we have shown to be problematic in cases with informational asymmetry like *Hadley*, but rather rejects its use in such cases.³⁵ Adler does not list what these other considerations that should be given more

33. See Adler, *supra* note 4, at 1581-83.

34. See *id.* at 1582.

35. See *id.* at 1570, 1582.

weight are, but he does give an example of one such consideration.³⁶ While analysts often assume that a chosen rule of contracts is going to be known to contracting parties, Adler considers a situation in which lawmakers know that sellers but not buyers are informed as to what the default rule is. Such informational asymmetry between buyers and sellers, Adler suggests, might make the *Hadley* rule undesirable. In such a situation, under the *Hadley* rule, buyers, unaware of it would assume that liability is unlimited, and sellers would have no incentive to correct their misperception. Therefore, under such circumstances, an unlimited liability rule might be preferable.

Now we agree with the relevance of considerations other than the effect of contractual liability on the revelation of information concerning buyers' valuation. Indeed, in our earlier article, we discussed several other considerations including one similar to the one noted by Adler.³⁷ So we will just make two observations. First, interestingly, the consideration that Adler notes as an example of ones that lawmakers should weight more heavily is one concerning the effects of default rules on the transfer of information—but not information concerning the value of performance to the buyer but rather on what the legal rule is. And this highlights the importance of the approach that we have taken—that of identifying the effect of default rules on the transfer of information.

Second, Adler does not note any reasons for assuming that the consideration that he discusses involves less practical problems for lawmakers than the considerations on which our analysis has focused. Although lawmakers might sometimes not have needed information to decide that a limitation on liability will affect the transfer of information concerning buyer valuation, they similarly might sometimes have difficulty identifying which parties know the legal rules and which do not. Thus, although we agree that all relevant considerations should be taken into account, we see no reason to accept Adler's view that the considerations that we have identified should be generally treated with more skepticism than other considerations.

36. See *id.* at 1582-83.

37. See Bebchuk & Shavell, *supra* note 1, at 303-08. We discuss the possibility that lawmakers know that sellers are unaware of the possibility that high-valuation buyers exist. We also discuss considerations concerning deliberate breach, buyers' precautions and mitigation of losses, buyers' risk-aversion, sellers' administrative ability to accord differential treatment to different buyers, and the distributional consequences of alternative rules.

