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RECONSIDERING CONTRACTUAL  
LIABILITY AND THE INCENTIVE  
TO REVEAL INFORMATION

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the Incentive to Reveal Information  
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**ABSTRACT**

In an earlier work, we analyzed how the legal rules governing contractual liability affect the transfer of information between the parties to the contract. In particular, we showed how limitations on contractual liability might lead high valuation buyers to reveal their valuation of performance, and we identified the circumstances under which such limitations on liability are and are not socially desirable. In an article forthcoming in the *Stanford Law Review*, Barry Adler develops a critique of our analysis, as well as that of Ayres and Gertner, who independently argued that contractual rules can beneficially facilitate information transfers. We reconsider here the subject of contractual liability and the revelation of information and respond to Adler's critique. We find Adler's model to be a natural extension of ours rather than a departure from it. Our reexamination leads to the conclusion that the informational effects that our work analyzed are important to take into account in designing contract rules.

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## I. CONTRACTUAL LIABILITY AND THE REVELATION OF INFORMATION

In an earlier article,<sup>1</sup> we analyzed how the rules governing contractual liability -- and, in particular, the rule developed in the famous case of *Hadley v. Baxendale*<sup>2</sup> -- might spur desirable transfers of information when contracts are formed. We analyzed the nature of the informational advantage that the *Hadley* rule might possess, and we identified the circumstances under which this rule is and is not desirable.

Ayres and Gertner, working independently of us, also examined how the *Hadley* rule might provide incentives to transfer information.<sup>3</sup> Unlike our article, theirs did not recognize 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 article published in this issue of the *Stanford Law Review*,<sup>4</sup> 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 would do best to ignore the type of considerations on which our work has focused. In this paper, we examine whether his criticism of our work is warranted and 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. The court established that

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<sup>1</sup>Lucian Bebchuk and Steven Shavell, "Information and the Scope of Liability for Breach of Contract: The Rule of *Hadley v. Baxendale*," 7 *Journal of Law, Economics, and Organization* 284 (1991). The possibility that the rule in *Hadley* might lead to informational transfers was also noted in earlier work by John Barton, *The Economic Basis of Damages for Breach of Contract*, 1 *J. Legal Stud.* 277, 295 (1972); and Richard A. Posner, *Economic Analysis of Law*, 1<sup>st</sup> edition (1972) at 60. But these writers did not develop their observations.

<sup>2</sup> 9 Ex.341, 156 Eng. rep. 145 (1854).

<sup>3</sup>See Ayres and Gertner, "Filling Gaps in Incomplete Contracts: An Economic theory of default Rules," 99 *Yale Law Journal* 87 (1989). The Ayres-Gertner article was actually written after ours, though we understand independently of it. The first draft of our article was circulated in 1983 and was presented that year at the University of Pennsylvania Law School. Ayres and Gertner's article cites our 1983 article, see *id.* 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 appeared in 1991, whereas Ayres' and Gertner's was published in 1989.

<sup>4</sup> See Adler, "The Questionable Ascent of *Hadley v. Baxendale*," New York University Law School Working Paper, November, 1998, and forthcoming in the *Stanford Law Review*.

liability should be limited to losses "arising ... according to the usual course of things," or that may be reasonably 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."<sup>5</sup> 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 was made. 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.<sup>6</sup>

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, it might sometimes be desirable for sellers to be able to distinguish between buyers with high valuation and those with low valuation. 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, and in which it differed from that of Ayres and Gertner, 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. Such a separation might also take place under a rule of unlimited liability (a possibility that Ayres and Gertner assumed would not eventuate) if low valuation buyers identify themselves -- or, equivalently, sign limited liability contracts -- in order to obtain a lower contract price. Such opting out by low valuation buyers to limited liability contracts would also have the consequence of achieving separation between low and high valuation buyers (and different levels of precautions used for the two groups).

Although separation could in principle occur under both rules, we showed that an advantage of the *Hadley* limited liability rule is that it can produce separation in a way that is least costly. Separation under the unlimited liability rule requires communication to take place, and transaction 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.

Third, while our analysis identified a benefit of the *Hadley* rule, it also identified a cost that the rule might have. In contrast to Ayres and Gertner, who saw only benefits in the *Hadley* rule, our analysis showed that it also might be sometimes undesirable -- and identified the circumstances under which it is and is not desirable. In, particular, we showed that *Hadley* rule might be inferior in situations in which separation between buyers' types is too costly to occur. In such cases, we showed that 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 use

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<sup>5</sup>See 156 Eng. Rep. at 151.

<sup>6</sup>See, for example, Calamari and Perillo, *The Law of Contract* (1987) §14-5); Farnsworth, *Contracts* (1982) §12.14.

uniformly 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 valuation and high valuation buyers.

In his article, Adler introduces new assumptions 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. Introducing this possibility, he argues, might discourage high valuation buyers from revealing themselves under the *Hadley* rule and might make the *Hadley* rule undesirable. Moreover, he argues that because this possibility makes it more difficult to determine whether the *Hadley* rule is desirable, lawmakers will often find themselves practically unable to use our analysis to help them decide whether to employ the rule.

Section II below suggests that Adler's analysis 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's losses from breach to be probabilistic. Also, as noted above, our analysis did identify circumstances in which the *Hadley* rule is undesirable. Thus, Adler's conclusion -- that the *Hadley* rule might sometimes be undesirable -- is similar to ours (though it contrasts with that of Ayres and Gertner who, as we said, saw only advantages in this rule). 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 high and low valuation buyers is not going to take place, 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.

Section III examines what conclusions can be drawn from Adler's extension of our analysis. We suggest that the implications of the extension are much less important than indicated by Adler. We consider two types of policy implications, concerning what is the optimal rule under our analysis, and whether such analysis should be used to inform lawmaking. First, we question whether Adler's extension significantly affects the set of cases in which unlimited liability is desirable. Although the extension might have modest implications for the optimal contours of the *Hadley* rule, it does not undermine the desirability of the rule for a significant core of cases. Second, we suggest that Adler's extension, and the questions it raises, do not imply that the sort of analysis that we have developed should fail to inform lawmaking.

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

The results of Adler's analysis are, we claim, a natural extension of, not a pronounced departure from, our results. As we said, the model that Adler employs is essentially the one that we developed, but 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 this is \$5.<sup>7</sup> There is also some high level of precautions that is optimal for sellers to exercise for buyers who place a high valuation of performance; suppose that it is \$100.<sup>8</sup>

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 of the 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.<sup>9</sup> Recognition that the optimal level for the pool is an intermediate, blended level (rather than the low level) is one way in which our analysis differed from that of Ayres and Gertner, who essentially ignore the blended possibility.<sup>10</sup> The feature 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 to sellers. Thus, for sellers to be able to tell buyers apart, and to use different 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. The potential benefit of the *Hadley* rule that we found arises when the transfer of information to sellers about buyers' valuations is socially desirable.

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 benefits of communication are that the sellers can exercise a different level

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<sup>7</sup>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 precautions, and  $L$  the low valuation. Then the optimal level of precautions 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 high valuation buyers would agree to in contractual negotiations.

<sup>8</sup>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  $x_H$ .

<sup>9</sup>To be specific, let  $\alpha$  be the proportion of high valuation buyers (5% in our example). Then the optimal blended level of precautions is the  $x$  that maximizes  $p(x)[\alpha H + (1 - \alpha)L] - x$ .

<sup>10</sup>Ayres and Gertner stipulate, at p. 110, that, when sellers face the complete pool of buyers, they will use the low level of precautions.

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 valuation and high valuation buyers will be desirable if these social benefits exceed communication costs.

An important point of our analysis was, as we mentioned, 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.

Now the benefit of the *Hadley* rule is that, when separation between low valuation and high valuation buyers is desirable, it will occur in the least costly way just described. 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 higher compensation they will have to pay 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.<sup>11</sup>

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**

Because Adler focuses on the possible shortcomings of the *Hadley* rule, let us turn to those. As we stated, our analysis identified reasons that the *Hadley* rule might be undesirable (in contrast to Ayres and Gertner, who overlooked this possibility).

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. 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.

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. example).

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<sup>11</sup>We demonstrated in our model that whenever communication is desirable, then the *Hadley* rule will always lead high valuation buyers to identify themselves. This result does not always hold in the presence of the complication introduced by Adler.

Now compare this outcome with the outcome 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,  $95\% \times \$100$  plus  $5\% \times \$10,000$ , or \$595 (rather than \$100, as under the *Hadley* rule). Consequently, sellers will set the uniform level of precautions at the intermediate level of \$8. 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 why 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. 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.

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.

The reasoning that explains why this additional difference between low and high valuation buyers might deter high valuation buyers from identifying 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. 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. Whether this refinement has significant policy implications is the question to which we now turn.

### III. POLICY IMPLICATIONS

We discuss here two types of implications that Adler's analysis might have. In Section A, we examine the implications that his analysis might have 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. In section B, we 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. We believe that this skeptical claim is unwarranted.

#### 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 consideration 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 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 which could prevent any subsidization of high valuation buyers. Suppose that the reason high valuation buyers would suffer higher damages because 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 foregoing interpretation of the *Hadley* rule that would render his point inapplicable, but says that courts often use other version of the rule. We do not know how often courts use one or another interpretation (although we find the *Hadley* court's interpretation the more natural), and in any event, if one interpretation is superior to the other, there is no reason for Adler to fail to recommend it.

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 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* -- 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 type of conclusion that they draw 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 becomes much less useful for lawmakers. In our view, this conclusion is not warranted.

In analysis of legal policy, it is, of course, 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 respect to 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. 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' valuations of performance are substantially higher than the valuations of ordinary buyers.

In any event, even if our conclusions are thought to be less clear than in our opinion, there would still not be good reason 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, we are not certain what is envisioned about them. A crucial question is whether it is presumed that the high valuation buyer communicates his valuation and then the two bargain about the damage rule they would adopt, or whether the two bargain about the damage rule they would adopt without the buyer having communicated his valuation. There is no clear, natural, answer to

this question, raising doubts about the meaning of the alternative that Adler finds appealing.

In sum, whether and how information will be communicated are important considerations in the design of contract rules. Identifying and understanding these issues has been the goal of our analysis, and we welcome Adler's extension of it. We do not accept, however, Adler's view that the conclusions we have drawn are mainly of theoretical, not practical, value. Our analysis of the *Hadley* rule has pointed to empirically important and identifiable factors about the socially desirable transfer of information when contracts are formed that can be of aid to lawmakers.