

Contracts, Holdup, and Legal Intervention

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1. Introduction

The object of this article is to develop the point that the problems associated with contractual holdup may justify legal intervention in theory and to relate this conclusion to legal intervention in practice, in the form of the voiding of certain contracts and the cabining of price.

The term “contractual holdup” is employed here in a standard way; it refers to situations in which a party to a new or existing contract accedes to a very disadvantageous demand due to the party’s being in a circumstance of substantial need.¹ In other words, contractual holdup arises in the realm of bilateral monopoly. Stock examples of contractual holdup concern property owners who experience pressing liquidity problems or who are even physically threatened (almost a literal holdup), businesses with immediate requirements for specific goods or services, parties to contracts who face the prospect of breach at critical junctures, individuals whose cars break down and desire tows, and ships in distress.

The difficulties that contractual holdup engenders are ones of incentives and risk-bearing and are reviewed in section 2. As is generally appreciated, the possibility of holdup leads to a range of undesirable incentives: wasteful efforts to engage in holdup (arranging a threat of violence, using a needlessly expensive construction method with which others are unfamiliar in order to make a midstream threat of breach); inefficient precautions to avoid holdup (purchasing a reserve engine for a ship even though rescue would be likely and cheap to effect); dulled investment motives (reducing advertising of a television because the show’s profits may be extorted by the cast in renegotiations). Holdup prices may also represent a significant risk (suppose that a tugboat could obtain an agreement for half the value of a vessel for towing it to safe harbor).

How the law can alleviate the undesirable consequences of contractual holdup is addressed in section 3. One approach is for the law simply to void contracts or their modifications, since that will remove the prospect of profit from holdup. This policy may be desirable when the events that permit holdup to occur are engineered in some fashion (the threat of violence, the needlessly expensive construction method), for these events would not have been instigated if they would not have resulted in enforceable contracts. When, however, situations of need are not engineered (mechanical problems cause a car to break down, bad weather puts a ship in jeopardy), flat voiding of contracts is clearly undesirable, since contracts for aid in situations of need (to tow a car or a ship) are often, if not typically, socially beneficial. In these circumstances, the policy of controlling the

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¹ The word “holdup” may first have been used in roughly this sense in the economics literature by Goldberg (1976), p. 439; it has also been mentioned by legal academics, for example, by Corbin (1963), 1A, p. 105, in his treatise on contracts.

contract price is preferable, as that policy can reduce the problems of holdup but still allow contracts to be made. Administering a policy of price control, though, involves costs and a potential difficulty: because the information of courts or regulators is likely to be imperfect, the price that is employed could be mistakenly constraining and chill desirable contracts (if the ceiling on the price for rescue at sea is too low, the task may not be worth a salvor's while). In view of these problems, it may be best for legal intervention to be restricted in scope, limited to problems of holdup surpassing a threshold of seriousness.

Both types of legal intervention in contracts and their modifications – voiding without regard to price and control of price – are used by courts to counter problems of pronounced holdup, as is described in section 4. Moreover, what is observed seems consistent with economic logic in its broad qualitative aspects. In particular, voiding regardless of price tends to be the legal policy when situations of need are engineered or something close to that, and price-conditioned voiding tends to be the legal policy otherwise. Under price-conditioned voiding, a contract is voided only if its price exceeds a fair level; this is the primary way in which price control is effected by courts (although sometimes the policy is implicit). The voiding of contracts under contract law is achieved mainly through the doctrines of duress, bad faith, and unconscionability, and if a correct price is substituted for a voided contract price, it is often as a result of the use of restitutionary principles. Admiralty law doctrine also illustrates (in almost expressly economic terms) the control of contract price in the face of serious holdup.

Not only do courts intervene in contracts to remedy substantial problems of holdup, various price control regulations appear to serve the same objective, at least in part. For instance, as section 4 notes, maximum price ordinances for car towing services and requirements that hotels post undiscounted prices prevent holdup, among their purposes, as did the historically important rule of *laesio enormis*, which generally limited the magnitude of deviations from market prices during the Middle Ages. Regulation that sets price rather than just places a ceiling on price also can prevent holdup. Two examples that are discussed concern taxi rate regulation and emergency price regulation. But such regulation has the problematic feature that it prevents variation of price due to overall market forces.

A number of issues relating to the foregoing analysis of holdup and the law are addressed in the concluding section 5. Among these is that legal intervention in fresh contracts to prevent holdup may be interpreted as a response to the inability of parties to have contracted at an earlier time, for had they done so, they would have agreed to restrain problems of holdup. An example is mentioned in which something like *ex ante* contracting to combat holdup does occur – members of the American Automobile Association effectively contract in advance with towing services to obtain help in emergencies.

Also considered is the extensive economic literature on contracting and holdup.² This literature has focused on holdup in the context of modification of contracts rather than fresh contracts and has generally presumed that the law routinely enforces

² See, for example, the textbook treatment of Bolton and Dewatripont (2005), chs. 11 and 12, Hart (1995), chs. 1 and 2, Klein, Crawford, and Alchian (1978), the January, 1999, special issue on contracts of the *Review of Economic Studies*, Williamson (1985), and other references cited in section 5.

modifications (courts have been assumed to lack the information needed to intervene). In regard to contractually-specified mechanisms that would govern renegotiation and might function as a remedy for holdup problems, two points are observed: that such mechanisms seemingly can be made legally enforceable; but that there is little evidence that contracting parties actually do attempt to use mechanisms to control renegotiation.

The main contribution of this article to prior economic writing on holdup is that it identifies the basic point that legal intervention in contracts to alleviate holdup problems may be desirable in theory and that legal intervention occurs in practice in a way that roughly comports with theory. In the law and economics literature, legal intervention in contracts when holdup occurs has been examined by a number of writers,³ but they do not emphasize that it may make economic sense for the law to control price (rather than just to void contracts).⁴

2. Contractual Holdup and the Problems it Creates

For purposes of discussion, it will be useful to list a number of examples of holdup (others will be mentioned below).

(a) In *Baker v. Morton*, Baker was induced to sign over his land to another person for free because of threats made by an organization known as the Omaha Claim Club, operating in the then territory of Nebraska.⁵ The tactics of the club included taking a landowner who refused to sell his property to the Missouri River and, with a rope tied around his neck, repeatedly dunking him until he complied.

(b) A construction company made a contract to build a factory for a manufacturer and used a method which was more expensive than needed for the job and with which other construction companies did not have experience. Half way through construction, the company threatened breach unless the contract price was raised substantially, and the manufacturer agreed.⁶

(c) On the afternoon of December 31st, a fairly large restaurant in a small town found that its electricity had failed due to a wiring problem. Without electricity, the restaurant would be unable to operate that evening, normally its most profitable of the year. The single electrician in town demanded and received payment of \$2,000 for the one hour repair job, for which his normal rate would have been \$80.

(d) In *Beckwith v. Frisbie*, Beckwith, a farmer, hired Frisbie, a canal boat owner, to transport oats to New York during the winter.⁷ It happened that Frisbie's boat froze in place in the canal and that the oats on board had to be stored to protect them, at a cost to

³ See Aivazian, et al. (1984), Bar-Gill and Ben-Shahar (2004, 2005), Graham and Peirce (1989), Johnston (1993), Muris (1981), Posner (1977), Trebilcock (1995), and notes 23, 24, 27, and 60 below.

⁴ However, Craswell (1995), who examines holdup and enforcement of contracts from a non-economic perspective, insightfully observes that a price-conditioned voiding policy may lead to the making of contracts at fair rather than high prices.

⁵ 79 U.S. 150 (1870).

⁶ This is a hypothetical example, as will be some others.

⁷ 32 Vt. 559 (1859).

Frisbie. Frisbie refused to release the oats unless he was paid more than initially agreed, and more than was needed to compensate him for the cost of storing the oats. Beckwith complied with Frisbie's demand in order to recover and sell his oats, at a time when the market price of oats was falling.

(e) In *Magnolia Petroleum Co. v. National Oil Transport Co.*, a towboat came upon a barge in a helpless and endangered position.⁸ The towboat master obtained an agreement to be paid \$15,000 for a tow of about one day, under weather conditions that were not dangerous, and when normal daily towage rates ranged from \$500 to \$600.

(f) In *Alaska Packers' Association v. Delmonico*, the crew of a fishing vessel demanded and obtained a contract modification under which their wage was doubled, from \$50 to \$100 for the summer.⁹ The fishermen had threatened to quit otherwise, and it is said that it would have been impossible for them to be replaced because they were in a remote location in Alaska and the salmon fishing season was short and about to begin.¹⁰

(g) James Gandolfini, star of the hit television series, *The Sopranos*, threatened to stop filming new episodes unless his contract with HBO was renegotiated for a significantly higher amount than the \$400,000 per episode that he had been receiving. HBO agreed to an increase, purportedly bringing Gandolfini's per episode payment to over \$800,000.¹¹

At the outset, we should comment on how it is that holdup occurs, that is, on what gives the threatening party, whom we will often call a "contractor," bargaining power over the other party, whom we will often call a "victim."¹² This is a relatively straightforward matter in regard to a fresh contract in a case like that of the electrician or in a case of rescue like that in *Magnolia Petroleum*. In such cases, there is a great need for a service or good that cannot readily be supplied by a party other than the contractor, who can simply choose not to transact. In a situation like that of *Baker v. Morton*, however, the threat is to injure the victim, which is a crime, so how is it that the threat

⁸ 286 F. 40 (5th Cir. 1923).

⁹ 117 F. 99 (9th Cir. 1902).

¹⁰ Although this paragraph summarizes the facts of the case as seen by the court and as regarded by commentators, a recent article, Threedy (2000), offers another interpretation, suggesting that the crew might have had valid complaints and that Alaska Packers would not have suffered much had the crew not caught any salmon. Among other things, Alaska Packers might not have wanted to catch more salmon – there was a surfeit of it; Alaska Packers could probably have purchased more salmon from Indians or from other cannery owners; its main purpose in hiring a crew may have been to transport its canned salmon back to San Francisco. I will, however, make the conventional assumptions about the case.

¹¹ Gandolfini made his threat in early March, 2003, before the filming of the fifth season of *The Sopranos*, and a reached a settlement later in the month with HBO. See CNN, "Soprano's Kingpin Set for Raise," March 18, 2003, at www.cnn.com/2003/SHOWBIZ/TV/03/18/television.sopranos.reut and E-Online, "'Sopranos' back to Shady Business," March 19, 2003, at www.eonline.com/News/Items/0,1,11470,00.html.

¹² This terminology will be employed even though a "victim" might not find himself in a situation of need, or if he does, might not meet with a contractor, or if he does meet with a contractor, might not be held up.

may have credibility? In *Baker v. Morton* the apparent answer is that committing a crime might well not have exposed the Omaha Claim Club to real penalty due to its power in the Nebraska territory,¹³ and in other cases in which the threat is a crime or a tort, one often finds a reason for believing that law enforcement would not have been likely.¹⁴ In cases where modifications of contracts are at issue, a party threatening breach would, if breach were committed, have to pay damages, and the usual measure of damages is the expectation measure, making the victim whole. Hence, one might ask why, for example, in *Alaska Packers* or *The Sopranos* cases, the threatened party agreed to a change in the contract terms. One part of the answer may concern inability of the threatening party to pay damages; it is doubtful that the crew of the fishing boat had much in assets and could pay damages,¹⁵ and one wonders also if Gandolfini possessed holdings nearly sufficient to pay HBO for its claimed losses from a breach, perhaps \$100 million.¹⁶ Closely related, damages are sometimes difficult to calculate, and as judicially determined would be significantly less than the victim's loss from breach. Another part of the explanation may be that the party threatening breach may make a counterclaim in order to inject uncertainty into the ability of the victim of the threat to collect damages.¹⁷

Let us now discuss briefly the types of problem that contractual holdup can create. The reader may want to bear in mind a simple model with the following characteristics.¹⁸ Victims may find themselves in situations of need, that is, circumstances in which they will suffer a loss unless given aid by a contractor. Various actions of the parties may affect the probability of situations of need arising, the probability that a victim in a situation of need will come into contact with a contractor, the cost of giving aid, and the loss that the victim would suffer in the absence of aid. The cost of aid is presumed to be less than the loss a victim in a situation of need would suffer, so that a victim and a

¹³ The opinion states on p. 150 that "The club made laws and promulgated decrees to suit its purposes, and enforced their observance with revolvers, guns, bayonets, ropes, and other appliances.... The sheriff of the county, secretary of the Territory, mayor of the city, and register and receiver of the land office, all held high positions in the club."

¹⁴ For example, in *Barton v. Armstrong*, 3 A.L.R. 355 (Privy Council 1973), Armstrong threatened to kill a business associate unless he signed an agreement Armstrong wanted. Armstrong's statements were oral, sometimes veiled, sometimes made anonymously in late night telephone calls, and included the threat to hire a hit man, such that Barton could reasonably believe that Armstrong might think he could get away with murder.

¹⁵ The opinion states on p. 102 that "it is quite probable...that they [the crew] may have been unable to respond in damages."

¹⁶ See E-Online, "'Sopranos' back to Shady Business," March 19, 2003, at www.eonline.com/News/Items/0,1,11470,00.html.

¹⁷ In *Alaska Packers*, the crew asserted that the nets on the fishing vessel were in poor repair (which would compromise the ability of a crew member to earn incentive payments of two cents per salmon caught). In *The Sopranos* matter, Gandolfini asserted that HBO had violated an element of California labor law; see E-Online, "HBO Puts Hit on Gandolfini," March 11, 2003, at www.eonline.com/News/Items/0,1,11420,00.html.

¹⁸ This model concerns fresh contracts and a formal version of it is set out below; a similar model would apply to contract modification.

contractor will have a reason to contract. At most one contractor will be available to furnish aid to a victim – bilateral monopoly is assumed – and bargaining will result in the contractor obtaining a positive fraction of the surplus from a contract. For concreteness, the contractor's fraction of the surplus may be supposed to be substantial, so that we will refer to the contract price as a holdup price. The social objective is the minimization of social costs: the sum of the costs of any efforts made prior to the occurrence of situations of need, the costs of furnishing aid in situations of need, losses sustained in situations of need, together with risk-bearing costs where parties are risk-averse.

One problem with holdup is that it can lead contractors to invest effort to create situations of need. Clearly, any such effort is socially undesirable, because it is costly in itself and can only increase subsequent social costs. But the promise of contractor profit from the charging of holdup prices may lead contractors to make efforts to engineer situations of need. This is obviously illustrated by the case of *Baker v. Morton*, since the Omaha Claim Club invested energy in dragging Baker to the Missouri River to demonstrate the reality of its threat and in other ways devoted resources to its extractive activities. The phenomenon is also illustrated (in a probably empirically more relevant way) by example (b), where the construction company decided to use an expensive method not because it would yield a better outcome but rather because it would allow the construction company to hold up the victim, since other construction companies would lack the knowledge to complete the job using the method.

A second problem with holdup is that it can lead victims to expend excessive effort toward reducing the likelihood of holdup or its consequences. The degree to which victims will exert effort will depend on their desire to avoid paying the holdup price, for that is the private cost to them of holdup. To the extent that this price exceeds the actual cost of aid, victims will be led to spend too much from a social perspective protecting themselves against holdup. Illustrating this possibility of wasteful expenditure would be Baker hiring armed guards to thwart the Omaha Claim Club, the restaurant in example (c) spending on a backup electrical system or on its own electrician, or the barge in *Magnolia Petroleum* outfitting itself with a spare engine.¹⁹

A third problem with holdup is that it can dilute victims' incentives to invest in their enterprises. If the holdup price is, as we have assumed, a significant fraction of the surplus from aid in a situation of need, then holdup constitutes a form of tax on the fruits of investment and dulls the incentive to invest. For instance, we might find that Baker would not improve his property in Nebraska, say by putting up a barn, if the value of the barn would be extracted from him in his transaction with the Omaha Claim Club (or if his having the barn would make him a more likely target of the Club). Likewise, the ship owner in *Alaska Packers* might decide not to install greater storage capacity for salmon if the owner felt that that would only accentuate the demands of the crew were it to threaten breach; or HBO might decide not to promote *The Sopranos* as much as would maximize total profits because of the possibility of extraction of profits by Gandolfini and other cast members.

A fourth issue relating to holdup is of a different character: contractors' incentives to search for victims in situations of need, and to make related investments, will be closer

¹⁹ The spare engine might not be socially justified if rescue by a tugboat would be fairly likely and its cost would be modest (such as \$500 to \$600) compared to a holdup price (such as \$15,000).

to the desirable level the higher the price they obtain. For a tugboat's incentives to engage in search, or to purchase equipment to lower the cost of towing, to be optimal, the tugboat would need to receive the full surplus from giving aid, not just a fraction of it. Hence, high holdup prices have a socially beneficial aspect rather than a detrimental one.

A fifth consideration, however, is that holdup prices impose a form of risk on victims. To the degree that victims are risk averse and that holdup prices are high in relation to their assets, holdup results in risk-bearing losses.²⁰ Such risk-bearing losses are important in a case like that of *Baker v. Morton*, since Baker was forced to give up his property for nothing, and perhaps would also be in a case like *Magnolia Petroleum* if the barge had been owned by a single individual.²¹

From the foregoing, one can see that holdup creates several types of incentive problems and a possible problem of risk-bearing, but also has a possible desirable incentive effect on contractor search and investment.

The issue of holdup will be considered formally only for new contracts for simplicity, using two versions of the model described informally above. Assume that victims and contractors might meet when victims are in situations of need and, for convenience, that they are risk-neutral. If a victim in a situation of need meets a contractor, the latter can furnish aid and save the victim from suffering harm at a cost less than the harm; otherwise the victim will suffer harm. Let

p = probability that a victim finds himself in a situation of need;

q = probability that a contractor meets with, and thus may contract with, a victim, given that he is in a situation of need;

c = cost to a contractor of giving aid to a victim in a situation of need, thereby preventing harm;

h = harm sustained by a victim in a situation of need if he is not given aid;

The probabilities p and q may be functions of the effort levels of victims and contractors, as will be discussed below. The cost c is assumed to be less than h , and c is assumed to be the same for all contractors and h the same for all victims.

The social objective is to minimize total expected social costs, the costs of effort (to be described), of aid, and of harm suffered.

If a contractor and victim in a situation of need meet, it is assumed that their information is symmetric and that they make a contract in which the contractor obtains a positive fraction of the surplus. Let

λ = fraction of the surplus from a contract obtained by the contractor.

Since the surplus from a contract is $(h - c)$, the contract price will be $c + \lambda(h - c)$.

Contractors engineer situations of need. Here assume contractors can raise the likelihood of situations of need and that victims can reduce it. Specifically, let

x = effort level of a victim;

y = effort level of a contractor;

²⁰ In strict logic, high holdup prices are also associated with risk-bearing for risk-averse contractors, in the sense that they would prefer a certain profit equal to the expected profit they probabilistically obtain from high holdup prices.

²¹ Although the problems of holdup just described are those on which this article will focus, there are others. For example, the ability to engage in holdup may raise the cost of bargaining.

and suppose that $p = p(x, y)$, where $p_x < 0$, $p_{xx} > 0$ when p is positive, where $p_y > 0$, $p_{yy} < 0$ when p is less than 1, and where $p(x, 0) = 0$. Assume also that x and y are chosen before situations of need might arise.

The first-best level of social costs S is obtained by minimizing

$$(1) \quad S(x, y) = x + y + p(x, y)[qc + (1 - q)h]$$

over x and y , since it is optimal for aid to be given whenever a contractor meets a victim. This expression is obviously achieved at $x^* = 0$ and $y^* = 0$, in which case $S(0, 0) = 0$, for p is 0 when y is 0. (Here and below, * designates first-best levels of variables.)

The Nash equilibrium behavior of parties is described as follows. A victim chooses x to minimize

$$(2) \quad x + p(x, y)[q(c + \lambda(h - c)) + (1 - q)h],$$

so, if x is positive, it satisfies

$$(3) \quad 1 = -p_x(x, y)[q(c + \lambda(h - c)) + (1 - q)h].$$

A contractor chooses y to maximize

$$(4) \quad p(x, y)[q\lambda(h - c)] - y,$$

so, if y is positive, it satisfies

$$(5) \quad 1 = p_y(x, y)[q\lambda(h - c)].$$

Assume for simplicity that the equilibrium, denoted $(x(\lambda), y(\lambda))$ is uniquely determined by λ . In general, not only is $y(\lambda)$ positive for λ sufficiently high, but because of that, $x(\lambda)$ is also positive, making S positive rather than 0.

Contractors search for victims in situations of need. Suppose now that contractor effort raises the probability that they will locate victims in situations of need and that victim effort again reduces the probability of situations of need.²² Thus, assume that $q = q(y)$, where $q'(y) > 0$ and $q''(y) < 0$ when q is less than 1, and that $p = p(x)$, where $p'(x) < 0$ and $p''(x) > 0$ when p is positive.

The first-best level of social costs is obtained by minimizing

$$(6) \quad S(x, y) = x + y + p(x)[q(y)c + (1 - q(y))h]$$

over x and y . Assuming that they are positive, the optimal values x^* and y^* satisfy

$$(7) \quad 1 = -p'(x)[q(y)c + (1 - q(y))h],$$

$$(8) \quad 1 = p(x)[q'(y)(h - c)].$$

Regarding the equilibrium behavior of parties, a victim selects x to minimize

$$(9) \quad x + p(x)[q(y)(c + \lambda(h - c)) + (1 - q(y))h],$$

so, if x is positive, it satisfies

$$(10) \quad 1 = -p'(x)[q(y)(c + \lambda(h - c)) + (1 - q(y))h] = 0.$$

Comparing this to (7), one can see that since bracketed term includes $q(y)\lambda(h - c)$, x is socially excessive given y , and the more so the greater is λ . A contractor chooses y to maximize

$$(11) \quad p(x)[q(y)\lambda(h - c)] - y,$$

so, if y is positive, it satisfies

$$(12) \quad 1 = p(x)[q'(y)\lambda(h - c)].$$

Comparing this to (8), it is apparent that when $\lambda < 1$, y is socially inadequate given x , and the more so the lower is λ . Again, denote the equilibrium values of x and y by $x(\lambda)$ and $y(\lambda)$.

²² This model is a version of that in Landes and Posner (1978).

3. Legal Intervention to Remedy Contractual Holdup Problems: In Theory

Having discussed the problems generated by contractual holdup, let us now examine how in principle legal intervention can alleviate these problems.²³

Consider first situations in which holdup is engineered by contractors, such as in *Baker v. Morton*, the construction company example (b), and *Beckwith v. Frisbie*. Because any effort devoted to creating situations of need is a social waste, it would be best to eliminate the incentive to engage in such effort. That can be accomplished if the court voids contracts in which positive effort was devoted to creating situations of need. An effort to organize a threat to drown a person like Baker will not be made if any resulting contract for sale of property would not be enforced; a company will not employ uncalled for construction methods if a modification it obtains as a consequence would not be enforced; and a transporter like Frisbie would not refuse to release oats if this could not allow it to obtain an enforceable increase in price.²⁴ Implementing a voiding policy when situations of need are engineered of course requires a court to be able to recognize such situations.²⁵

Now consider contexts in which holdup is not engineered by contractors, and in which it is ordinarily desirable for contracts for aid to be made when contractors encounter victims in need. Here, as explained in section 2, high prices create incentive problems for victims and impose risk on them, but also create beneficial incentives for contractors.

Thus, as a general matter there will be an optimal price, impounding some of the contractual surplus, that will best resolve the problems of holdup and the potential contractor incentive benefit of a high price. The magnitude of this optimal price, and how much it exceeds the usual market price, will depend on the particulars of the context. Consider the issue of provision of contractor incentives, which would raise the optimal price. This would presumably be a significant factor for maritime rescue by professional salvors, especially if conducted in dangerous conditions, since these rescuers need a financial motive to search and invest in vessels and equipment. But it is not obvious that, for instance, electricians need such incentives, for if a person needs an electrician, the person can usually just contact him.²⁶ Or consider risk aversion, which would call for a

²³ The general point that legal intervention can remedy the incentive problems due to holdup is to my knowledge first developed in perceptive articles by Muris (1981) and Aivazian, et al. (1984). They focus on contract modifications (as opposed to fresh contracts) and do not analyze the main issue taken up here: legal intervention in the form of flat voiding of contracts versus intervention based on price.

²⁴ This observation, that individuals will not engineer situations in which they can engage in contractual holdup if their contracts would be voided, has been mentioned before, for example by Bar-Gill and Ben-Shahar (2005), sec. 1E, Craswell (1995), pp. 215-218, and Shavell (2004), p. 335.

²⁵ One can imagine difficulties in determining if this were true. For instance, in example (b), the construction company might be thought by the court to have had a legitimate economic reason to use the expensive method, even though that is not true. If such informational problems are likely, the voiding policy under discussion might be inferior to a price-conditioned voiding policy (to be discussed below).

²⁶ An electrician might, however, need an incentive to monitor phone calls on weekends or after hours; and ships in distress could, if they had working radios and were not in imminent peril, solicit bids for

lower price the stronger the victim's aversion to risk and the greater the price in relation to a victim's wealth. Risk aversion might be quite relevant in regard to a rescue price equal to half a fishing vessel's value, where the vessel is the chief and only asset owned by a fisherman, but risk aversion would not be relevant in regard to a \$2,000 price paid by a hotel that is part of a large, national chain of hotels.

Given the optimal price, legal intervention to control price and prevent it from exceeding the optimal price may be desirable (ignoring for the moment the difficulties and cost of legal intervention). Legal intervention can be undertaken by the courts, on the basis of ex post consideration of contractual disputes. One way that this can be accomplished is by judicial price control – by a court replacing a contract price that exceeds the optimal price with a price equal to the optimal price, but otherwise enforcing the contract. Another policy that is effectively equivalent is price-conditioned voiding of contracts, under which, as was noted earlier, a court would void a contract if the price exceeded the optimal price, but otherwise would enforce it. Once parties learn that this policy is in place, they will not set a price exceeding the optimal price, since they will know it would not be enforceable. Under both of these judicial policies, the price would equal the optimal price if the unconstrained contract price would be larger than the optimal price.²⁷

Legal intervention can also be of an ex ante nature, effected through regulation that controls price. This form of intervention will generally be inferior to ex post, judicial intervention (continuing to set aside considerations of cost) if the ex ante regulation of price does not depend on the contractual environment in individual cases.²⁸

For the optimal price to be determined for the purposes of legal intervention, the state must in principle take into account the various functional relationships that we have discussed: that between contractor effort and the likelihood of finding a victim in a situation of need; that between victim effort and the probability of a situation of need arising; that between victim investment and the distribution of return. Additionally, the

help (as happened in *The Elfrida*, as will be noted below). Thus, the comparison between the electrician and the salvor is not necessarily as clear as is suggested in the text.

²⁷ The point just discussed, that when holdup is not engineered, legal intervention that controls price can alleviate the incentive and risk-bearing problems due to holdup, is, as has been stated, one of the main contributions of this article. Graham and Peirce (1989) and Johnston (1993) also consider judicial control of price, but in their analysis, price control has a different role from that here. Their models do not focus on holdup-related ex ante incentives or risk-bearing but rather on asymmetric information between the parties and the consequent possibility of failure to make ex post efficient agreements; price control in their models reduces the problem of inefficient failure to modify contracts or of inefficient costly litigation. Additionally, Bar-Gill and Ben-Shahar (2004) comment on the possibility that courts could control price in their basic analysis, but price control has no holdup-connected advantage there; for it is optimal in their basic model for all modifications to be enforced, regardless of the magnitude of the price, because neither ex ante incentive effects nor risk are considered. (They briefly consider incentive and risk-bearing problems in an extension of their basic model, but not the control of price to alleviate these problems.)

²⁸ Most examples of price regulation that will be noted in section 4 depend only on price, not on the contractual situation. However, an example is mentioned of a tow truck rate regulation that applies only in emergency circumstances, so this regulation does operate in a way that depends on the contractual environment. Even so, this regulation does not function so as to reflect the array of characteristics of the contractual context that courts would be likely to consider.

state needs to know the harm that might be suffered by the victim in the absence of aid, and the cost of giving aid.

The information of the state will, of course, be imperfect, meaning that practically optimal intervention will have to reflect the social costs of mistake in setting prices. A major cost of mistake in setting prices is discouragement of the making of desirable new contracts. If the price ceiling turns out to be less than the cost of furnishing aid, then a contract will not be made, even though the resulting harm to the victim could greatly exceed the cost of aid. For example, if the price allowed for rescuing a ship in danger of going aground were less than the actual cost to the salvor (suppose there was a risk to the salvor, owing to high seas), the salvor would not perform the rescue and the ship might be lost.

Similarly, mistakes in overseeing the terms of modifications of contracts may result in undesirable breach. If the price increase permitted by courts for a firm seeking to renegotiate a contract in the face of higher costs or unanticipated liquidity problems is not sufficient, the firm might breach even though continuing with its performance would be better.

To guard against such costly mistakes, resulting in failure to make desirable contracts or in undesirable breach of existing contracts, optimal policy should feature “generosity” in price setting and limits on whether there will be legal intervention.

Because the task that the state must perform in estimating the optimal price is of a complex nature – depending as it does on contractual situations that are so various and on an inference process using a wide range of very partial information – the task would be hard to describe precisely *ex ante*.²⁹ If the state’s task is difficult to articulate in an explicit manner in advance, it may not be beneficial for parties to make the effort in a contract to write down what principles should govern possible contract modification. Instead, the parties might be better off allowing the courts to intervene in modifications to control price using what are here termed optimal methods, given the courts’ imperfect information. Note that if the parties were able to say in advance how modification should be governed, then the holdup-related rationale for judicial intervention in modifications under discussion in this article would not be valid; for the parties would be able to guide their contract modifications themselves.

A further point should be added, although simple. Namely, judicial intervention to control price is expensive for the parties. This reinforces the conclusion that the optimal policy will be a generous one as to price and one which constrains the amount of legal intervention; for that will reduce the amount of litigation as well as ameliorate the chilling of desirable contracts.

Let us briefly consider legal intervention in contracts with regard to the two models of fresh contracts discussed in the previous section.

Contractors engineer situations of need. In this case, we want to verify that *if the state voids contracts, the first-best outcome will result*, that is, contractors will not exert

²⁹ Consideration of just a few judicial opinions in cases involving the enforceability of contract modifications would, I think, be sufficient to convince most readers that it would be realistically impossible to set out a clear set of rules that could be followed essentially mechanically that would produce similar decisions to the courts’.

effort to engineer situations of need and victims will not exert effort to reduce the chance of such situations. This conclusion is evident, since if contracts are voided, contractors cannot make profit so will choose $y = 0$. Hence, $p = 0$, implying (see (2)) that $x = 0$.

Note that the state needs no information to implement the voiding policy that results in the optimal outcome. This is because a situation of need can only arise if contractor effort y is positive. If, however, the model is changed, and it is assumed that $p(x, 0) > 0$, situations of need can arise even if $y = 0$. Then the policy that results in the optimal outcome would be to void contracts whenever y is positive; this would require the state to observe y .

Contractors search for victims in situations of need. Let

$z =$ regulated contract price,

and assume that $z \geq c$ (it is clear that $z < c$ cannot be optimal, as then contracts for aid would not be given). Given z , victims choose x to minimize

$$(13) \quad x + p(x)[q(y)z + (1 - q(y))h]$$

and contractors choose y to maximize

$$(14) \quad p(x)q(y)(z - c) - y.$$

These two problems implicitly determine x and y as functions of z , so that social costs can be written as

$$(15) \quad S(z) = x(z) + y(z) + p(x(z))[q(y(z))c + (1 - q(y(z)))h],$$

and let z^* be the optimal price, minimizing (15) (we assume uniquely, for simplicity).

Note that z^* leads only to a second-best optimum.³⁰

Now in the absence of legal intervention, the contract price will be $z(\lambda) = c + \lambda(h - c)$, which might or might not exceed z^* .

Hence, if the state sets the contract price at z^* , then the second-best optimum will be achieved regardless of the unconstrained price $z(\lambda)$. Also, *if the state employs a contract price ceiling, then the second-best optimum will be achieved if $z(\lambda) \geq z^*$* . As noted in the text of this section, the price ceiling policy can be implemented in two equivalent ways: by altering $z(\lambda)$ to z^* , or by voiding any contract in which the price z exceeds z^* . (Moreover, if the state were to void all contracts, the second-best optimum obviously would not be achieved.)

The determination of z^* requires the state to minimize (15), which requires the state to know c and h and the functions $p(x)$ and $q(y)$. It would be straightforward to introduce into the model uncertainty on the part of the state about the contractual environment, by considering distributions of c and h and of parameters identifying the functions $p(x)$ and $q(y)$.

4. Legal Intervention to Remedy Contractual Holdup Problems: In Practice

What decisions were reached by courts in the cases mentioned in section 2? In *Baker v. Morton*, the contract for sale of land was canceled. In *Beckwith v. Frisbie*, the price increase agreed to by Beckwith for release of his oats was not enforced, but Beckwith did have to pay for the expense Frisbie incurred to store the oats over the

³⁰ This is clear, since for (7) to be satisfied, z must equal c , whereas for (8) to be satisfied, z must equal h .

winter.³¹ In *Magnolia Petroleum v. National Oil Transport Co.*, the \$15,000 price was adjusted to \$1,700, which, note, exceeded the \$500 to \$600 normal daily towing rate. In *Alaska Packers*, the court refused to enforce the agreed modification. In the hypothetical example (b) involving the construction company, my suspicion is that the contract modification would not be enforced.³² In the example (c) concerning the electrician and the restaurant, my belief is that the price would be adjusted, probably to an amount of at most several hundred dollars.³³

As these legal cases illustrate, courts sometimes do, or sometimes likely would, intervene in contracts on grounds of holdup, either to void them or to control the price. Let me now summarize how this comes about under contract law and also under admiralty law principles. Then I will discuss certain legislation that controls price and that also functions to prevent significant holdup.

*Contract law: duress, good faith, unanticipated circumstances, and unconscionability.*³⁴ Courts may intervene in contracts and their modifications on grounds of duress.³⁵ According to the principles of duress, a contract or a modification may be voided if it is made as the result of an improper threat, and if the threat left the victim with little alternative.³⁶ Improper threats include threats of crimes and torts, and threats to act in lawful ways but that would violate the general contractual duty of good

³¹ Frisbie had imposed an extra \$25 charge on Beckwith. (Frisbie's justification was that he was not required to give credit of \$25 to Beckwith for an earlier payment for that amount that Beckwith made to the captain of Frisbie's boat.) Frisbie also imposed a charge of \$46.96 for storage of the oats. The decision negated the \$25 extra charge but did require Beckwith to pay the storage cost (yet gave him \$.75 credit for oats eaten by Frisbie's horses over the winter).

³² On grounds of bad faith, as is about to be discussed.

³³ On grounds of duress or unconscionability.

³⁴ For descriptions of contract law in single volume treatises, see Calamari and Perillo (1998) and Farnsworth (1999). Two basic sources on contract law are the *Restatement of Contracts 2nd*, an authoritative summary of the common law of contracts, and Article 2 of the Uniform Commercial Code (UCC), which has been incorporated by statute into the law in all states other than Louisiana. Article 2 of the UCC covers the sale of goods; the definition of goods is such that it covers a broad range of contracts. A standard reference on the UCC is White and Summers (2000).

³⁵ See Calamari and Perillo (1998), pp. 308-321, Farnsworth (1999), 264-273, *Restatement of Contracts 2nd*, §§174-176, UCC §2-209, and White and Summers (2000), pp. 57-60. See also the important articles on duress of Dawson (1947) and Hale (1943), and for extensive descriptions of cases on duress, see the still relevant articles of Dalzell (1942). It may be noted that the use of duress and related doctrines as rationales for intervention in contracts were different in the past: intervention in fresh contracts was less frequent; and intervention in modifications was more frequent (indeed, modifications were unlikely to be enforced whenever the seller received a higher price for doing what was already his contractual duty). See, for example, Farnsworth (1999), pp. 265, 276-283.

³⁶ *Restatement of Contracts 2nd*, §175(1), states "If a party's manifestation of assent is induced by an improper threat by the other party that leaves the victim no reasonable alternative, the contract is voidable by the victim."

faith and fair dealing;³⁷ the duty of good faith and fair dealing is given particular emphasis in the context of contract modification.³⁸ The victim's not having much alternative appears to mean that the disutility that he would suffer if the threat were carried out would be substantial.³⁹

An important factor bearing on the enforceability of contract modifications is whether the circumstances that gave rise to a change in a contract were unanticipated and provided an economic warrant for the alteration. If these conditions are not satisfied, the modification is frequently voided.⁴⁰

An additional legal concept affecting judicial intervention in contracts and their modifications is unconscionability.⁴¹ Unconscionability can refer to procedural factors under which a contract was made – notably, to whether a party was in a circumstance of need or was uninformed – or to the substance of a contract – to the deviation of the price or other terms from what seems fair in the light of market conditions. Contracts or modifications deemed to be unconscionable are generally voided.

Let me now review certain aspects of the operation of these elements of contract law, especially as they relate to whether and, if so, how contract price affects contract enforcement and to the possible chilling of contracts.

For certain types of improper threats, the voiding of contracts or of modifications generally does not depend on whether the price was considered unfair or deviant. This is true when the threat is to commit a crime or a tort,⁴² as in *Baker v. Morton*, since the threat there was murder, and as in *Beckwith*, since the threat there was to hold onto property not one's own, a tort. Another category of threats tending to result in voiding independent of price is threats that violate the duty of good faith and fair dealing.⁴³ The modification case given in example (b) could be considered to involve such misbehavior, since the company chose an unusual method of construction in order to be able to extract a price increase from the contract buyer.⁴⁴ *Alaska Packers* could also be viewed as

³⁷ *Restatement of Contracts 2nd*, §176, spells out categories of improper threats. On the general duty to act in good faith, see Calamari and Perillo (1998), pp. 457-461, Farnsworth (1999), pp. 504-509, *Restatement of Contracts, 2nd*, §205, and UCC §1-203.

³⁸ Farnsworth (1999), pp. 267-268, 282-283, *Restatement of Contracts 2nd*, §§89(a), 176, UCC §2-209, and White and Summers (2000), pp. 57-60.

³⁹ *Restatement of Contracts 2nd*, §175, Comments b and c.

⁴⁰ Calamari and Perillo (1998), p. 185, Farnsworth (1999), pp. 281-282, *Restatement of Contracts, 2nd*, §89(a), UCC §2-209, and White and Summers (2000), pp. 57-60.

⁴¹ Calamari and Perillo (1998), pp. 365-376, Farnsworth (1999), pp. 303-316, *Restatement of Contracts, 2nd*, §89(a), UCC §2-302, and White and Summers (2000), ch. 4.

⁴² *Restatement of Contracts 2nd*, §176(1)(a).

⁴³ *Restatement of Contracts 2nd*, §§175, 176(1)(d).

⁴⁴ Note that the threat in this case is to breach a contract, which is not a crime or a tort. A similar example is where a contract buyer A refuses to pay seller B for goods that have been delivered to him unless the price is lowered, knowing that B is in urgent need of cash to avoid foreclosure of a mortgage; see *Restatement of Contracts 2nd*, §175, Illustration 7. An additional example of bad faith, of a different nature,

violating the duty of good faith, assuming that the crew took advantage of the vulnerability of the Alaska Packers Association when no replacement crew could be found and when the crew had no reason for seeking an increase.⁴⁵ A further example of bad faith in a modification is *Capps v. Georgia Pacific*, in which Capps, a real estate broker, was forced to agree to radically reduce the commission owed him when Georgia Pacific threatened not to pay, knowing that Capps needed funds immediately to avert a mortgage foreclosure on his home.⁴⁶

That agreements resulting from the types of threat just mentioned may be voided regardless of price is consistent with the analysis in section 3. One of the points made there was that voiding removes the incentive to engineer situations of need and does not present a danger of chilling desirable contracts since those situations will not arise if there is voiding. The categories of threat under discussion are essentially engineered or at least have the characteristic that they would probably not have been made if it had been known that the threats would not result in enforceable contracts. The supposition, in other words, is that if the Omaha Claims Club knew its contract with Baker would not be enforced, it would not have threatened him; that if the crew in *Alaska Packers* knew its modification would not be enforced, it would not have threatened to quit; likewise with Georgia Pacific and its threat not to pay Capps, and so forth.⁴⁷

For other types of improper threats, those not crimes or torts or displaying bad faith, the voiding of contract or modifications may depend on whether the price was seen as unfair.⁴⁸ The contract in example (c) involving the electrician might well be voided on

is where a person A induces another person B to sign a contract by threatening to use his legal right in a different matter to attach a shipment of perishable goods of B (such as bananas), even though he could attach non-perishables. See §176, Illustration 7.

⁴⁵ The crew complained about the poor condition of the fishing nets. If true, that would have reduced the number of salmon taken and thus the two cents each crew member would obtain per salmon which he helped to catch. The court discounted this claim of the crew.

⁴⁶ 253 Or. 248, 453, P.2d 935 (1969).

⁴⁷ Note that in a case like *Capps* (unlike *Baker v. Morton* and the Omaha Claim Club), the view that flat voiding would remove the incentive to threaten breach does not follow from the model of an engineered situation of need. Georgia Pacific did not cause Capps to face foreclosure on his home; rather Georgia Pacific took advantage of this situation and threatened breach. To understand the effect of flat voiding in *Capps*, we need to say why Georgia Pacific would have wanted to make its threat assuming that a modification in its contract would be enforced. Presumably it did so in order to obtain a large reduction in the real estate commission, and it would not have made the threat had Capps not needed prompt payment so strongly, since making such a threat may involve a reputational cost to Georgia Pacific that would exceed the modest amount it could extract from Capps in normal circumstances. A related question is why Georgia Pacific's threat was credible to Capps. An answer may lie in the difficulty Capps might have had in proving damages and also in the point that, once Georgia Pacific made its threat, it would suffer a reputational loss for bargaining weakness if it did not follow through on it. An explanation along these lines would lead to the conclusion that, if Georgia Pacific anticipated its modification would be flatly voided, it would not have made its threat in the first place.

⁴⁸ *Restatement of Contracts 2nd*, §176(2) states that a necessary condition for certain threats to be considered improper is that the "resulting exchange is not on fair terms." See also §176 and Comments a and e. Also, §89(a) states that a modification is binding if it is "fair and equitable...."

grounds of unfairness of the price, since the price was \$2,000 rather than the usual \$80. *Magnolia Petroleum* and many other maritime rescue cases also provide illustrations (as will be discussed shortly). Another typical example is *Rodziewicz v. Waffco Heavy Duty Towing*, in which the court stated that a contract for \$4,070 for towing a truck that had broken down on the highway, and for which the normal charge would be about \$275, would not be enforceable.⁴⁹ A modification example would be a case where a builder seeks a modification because his costs unexpectedly rise by \$10,000, making the contract a losing proposition for him, but due to the great need of the buyer for timely completion, the builder is able to obtain a disproportionate modification increase in price of \$100,000.⁵⁰ Although in these examples courts did, or might be predicted to, explicitly mention the unfairness of price as a reason for voiding, an exorbitant price can exert influence as well by enhancing the willingness of a court to find bad faith or some other reason for voiding.

Cases in which modifications tend to be enforced are, as noted above, those in which the price was not seen as unreasonable and in which the circumstances that gave rise to a change in a contract affected the party threatening breach, were unanticipated, and provided an economic basis for the change. For instance, in *Watkins v. Carrig*, the Watkins firm contracted with Carrig to excavate his cellar for a stated price, but Watkins unexpectedly encountered rock, making his task harder to undertake than was foreseen.⁵¹ Carrig agreed to a price increase that was not found unreasonable in the situation, and the modification was enforced. In *Goebel v. Linn*, brewers agreed to pay more for ice than had been originally agreed, \$3.50 rather than \$2.00, when the ice crop failed due to an unexpectedly mild winter and no other suppliers of ice had ice available.⁵² Here, the price increase was said not to be too much under the circumstances and the modification was enforced. In *Schwartzreich v. Bauman-Basch*, a designer who had contracted to work for a wage of \$90 a week received another offer for \$115 a week. He obtained a modification in which his wage was raised to \$100, which was enforced, presumably in part because of the reasonableness of the wage increase in the circumstances.⁵³ In *The Sopranos* matter, a

⁴⁹ 763 N.E. 2d 491, 493 (Ind. Ct. Ap. 2002). In fact *Rodziewicz* did not make a contract with Waffco for \$4,070 – what happened is that Waffco refused to release *Rodziewicz*'s truck unless he paid \$4,070 – but the court announced what its decision would have been had there been such a contract. The court grounded its decision on unconscionability.

⁵⁰ An essentially similar example is implicitly furnished by *Goebel v. Linn*, to be described shortly, in which the circumstances of a supplier of ice became more difficult. In this case, the modification was enforced, a primary reason being that the price increase for ice was found reasonable (see especially p. 494); if the price increase had been higher, presumably the decision would have been not to enforce the modification.

⁵¹ 91 N.H. 459, 21 A.2d 591 (1941).

⁵² 47 Mich. 489, 11 N. W. 284 (1882).

⁵³ 231 N.Y. 196, 131 N.E. 887 (1921). An example of a contrary decision is *Davis & Company v. Morgan*, 117 Ga. 504 (Supreme Ct. of Georgia, 1903), where an employer increased the contract wage in response to an employee's receiving a higher offer from another employer, but the court refused to enforce the modification in the wage. Today, however, it seems that enforcement would be more likely; see note 40.

suspicion is that the increase in payment obtained by Gandolfini from HBO would be upheld if it was not grossly different from what he could obtain from outside offers (and apparently it was not), or at least that Gandolfini would have a greater chance of having his modification upheld than if he had obtained a much higher increase.⁵⁴

That the enforcement versus the voiding of the contracts and modifications in the types of cases under discussion depends on the price comports with section 3. For in the contexts at issue, it appears to be desirable that fresh contracts be made and that contractual relationships be continued, yet not at unreasonable price levels that would create substantial problems of holdup. In particular, it is desirable that electricians provide services to restaurants so that they can operate on New Year's eve; that tow trucks provide emergency help to truck drivers like Rodziewicz; that contractors like Carrig continue their work on basements for individuals like Watkins; that ice companies deliver ice to prevent brewers like Linn from losing their stock of beer. These socially good things will happen, with prices or modified prices being kept in check, under properly applied price-conditioned voiding, since if the allowed prices permit reasonable profits, the contracts and modifications will be made, and parties will not agree to higher than allowed prices for fear that the victim will later bring suit to have the contract voided. In contrast, recall that there is no need for price-constrained voiding in cases like *Beckwith* and *Capps*; for in such cases flat voiding does not chill desirable contracting.

A number of observations about the law just reviewed and its economic interpretation are worth adding. First, intervention by courts on the basis of price does not seem to occur unless the price deviates substantially from the estimated market price. This is based on an impression gained from reading cases (for instance, in *Rodziewicz* the \$4,070 price for a tow instead of the normal \$275 charge was found excessive, but in *Goebel v. Linn* the \$3.50 price for ice instead of \$2.00 was not) and also on the inference that, were courts willing to intervene whenever price deviations are modest, the volume of litigation about unfair prices would probably be vast rather than limited in scope as it is. If this view that courts' intervention is conservative in character is correct, it would fit with the point of section 3 that a cautious-of-intervention judicial policy may be desirable, given the costs of intervention and the danger of discouraging desirable contracts.

Second, the latter danger, of chilling desirable contracting, is an issue to which courts and commentators sometimes give explicit recognition. For example, in *Goebel v. Linn*, the court stated that it would be strange if the existing contract "could stand in the way of a new ... contract which should provide for a price that would enable both parties to save their interests."⁵⁵ The court also explained why it might have been in the mutual interests of the parties to modify their contract. "Suppose, for example, the defendants had satisfied themselves that the ice company under the very extraordinary circumstances

⁵⁴ That the \$800,000 to \$1,000,000 per episode that Gandolfini sought might have approximated his alternative market opportunity is suggested by this statement: "Gandolfini currently pulls in \$400,000 per episode and is said to want the big-time money paid to other prime-time stars. (Ray Romano earns \$800,000 per episode for *Everybody Loves Raymond* and Kelsey Grammer bags \$1.6 million an episode on *Frasier*.)" See E-Online, "HBO Puts Hit on Gandolfini," March 11, 2003, in www.eonline.com/News/Items/0,1,11420,00.html.

⁵⁵ See the opinion, p. 493.

of the entire failure of the local crop of ice must be ruined if their existing contracts were to be insisted upon, and must be utterly unable to respond in damages.... [T]hey must either make a new arrangement, or, in insisting on holding the ice company to the existing contract, they would ruin the ice company and thereby at the same time ruin themselves.”⁵⁶ Farnsworth expresses the same point in discussing modification of a construction contract.⁵⁷ Often, however, courts and commentators do not discuss the possibility of the policy of judicial intervention preventing desirable contracting. *Kelsey-Hayes v. Galtaco* is a typical example.⁵⁸ In this case, Galtaco, a supplier of castings to Kelsey-Hayes, threatened to close down its losing foundry operations unless it received price increases of 60 per cent. Kelsey-Hayes agreed to this demand because it greatly needed the castings; without them, it would not be able to provide certain brake assemblies to Ford, and Ford would probably have had to halt production of a vehicle line. Although the court engaged in a detailed and careful analysis of the case, it made no mention of the effect that its decision not to enforce the modification might have on the likelihood of undesirable breach in similar situations in the future. That is, the court wrote as if its decision would somehow not cause breach in an identical case in the future; the decision would only achieve a more equitable price in the instant case. Yet it seems that the court’s decision might cause a breach in a future identical case, since a future Galtaco would know that it could not obtain an enforceable 60 per cent price increase. At the same time, the court apparently believed that a breach in the instant case would have been undesirable, since if Kelsey-Hayes did not get the castings, Kelsey-Hayes would suffer greatly and Ford’s production of a vehicle line would be compromised. Thus the court may have made a decision that conflicted with its purposes. The lacuna in the court’s reasoning in *Kelsey-Hayes v. Galtaco*, a failure to account for the possibility of chilling desirable modifications in the future, is often seen in decisions,⁵⁹ and suggests that the danger of judicial mistake is not small.

An additional observation is that courts do not generally intervene in contracts on the basis of price alone, but rather intervene owing only to a joint consideration of price and other circumstances, notably of the victim’s degree of need, whether he was in a situation of duress. The economic interpretation of this observation is informational, that the price alone does not ordinarily tell courts enough to allow them to make judgments about the appropriateness of contracts. When, however, courts know that not only was the price seemingly high, but also that the victim was in a situation of duress, the courts have in this fact additional evidence giving them reason to think that the apparently high price was indeed excessive: for the element of the victim’s need gives the threatener the

⁵⁶ See the opinion, pp. 492-493.

⁵⁷ Farnsworth (1999), pp. 280-281.

⁵⁸ 749 F. Supp. 794 (E.D. Mich. 1990).

⁵⁹ See, for example, *Leggett v. Vinson*, 155 Miss. 411 (1929), in which the court refused to enforce a modification of a construction contract that was made when the contractor appeared to have run out of funds; the court made no reference to the effect its decision would have on the likelihood of breach in similar future cases.

bargaining power to extract a high price.⁶⁰ If a court knows that a tug charged a vessel that was in distress \$2,000 for a short tow when the normal price would be \$500, the court will reasonably infer that the high price was obtained because the vessel did not have the opportunity to search the market for tug services but rather had to deal, on the spot, with a single tug. Suppose, in contrast, that a court knows that a tug charged a vessel the same price of \$2,000, but that the vessel was not in distress. In this case, the court may infer that since the vessel presumably did have the time to search the market for tug services, the charging of a \$2,000 price probably has an explanation involving factors affecting cost (perhaps the cargo in the vessel was fragile, so the tow had to be done carefully, using special equipment).⁶¹

Another matter of interest is whether, when courts void a contract, they substitute a price they consider fair and, if so, how the new price is determined. In cases where the contract that is voided was a new contract and a service was performed, such as that involving the electrician or the towing of a vehicle as in *Rodziewicz*, the party who supplied the service is normally compensated for it, at what is estimated by the court to be the market rate. This compensation for the service provided often occurs through application of a restitutionary remedy. If, however, the new contract that is voided was for conveyance of existing goods or property, the transaction can be undone (the goods or property can be returned to the seller, and the money paid returned to the buyer), so there is no need for the court to determine a substitute price. If what was voided was a modification, the usual price that governs is the original contract price, so that, again, the court need not, and generally does not, determine a substitute price. Hence, except in the first category of cases (fresh contracts involving services), courts do not control price by providing a substitute price. Rather, the control of price, comes about because the voiding is conditioned on price – the parties know that if the price is too deviant, their contract or modification will not be enforced – or else because there is flat voiding (when threats are engineered or represent violations of the duty of good faith).

Admiralty law: salvage contracts. In cases involving contracts for salvage, admiralty law principles guide courts.⁶² According to these principles, contracts made when vessels are in great danger are subject to careful judicial scrutiny, and if prices are

⁶⁰ It is instructive to contrast the general point now being made, that it is rational for courts to consider the victim's situation of duress, to Bar-Gill and Ben-Shahar (2004), who stress on p. 417 that "courts should not examine whether the buyer was coerced..." and on p. 392 that modifications should be enforced "even if blatantly coercive," whenever the threat to breach is credible. The reason for their interesting (and radical) recommendation is that they generally compare the policy of enforcing a modification at the agreed price with the policy of flat voiding of the modification, not with the policy of price-conditioned voiding. Given the choice that they posit faces the courts, their conclusion is correct: for flat voiding would lead to breach, to the mutual detriment of the parties, presuming the threat to breach was credible. But if courts can pursue a policy of price-conditioned voiding, the situation of the victim of the threat becomes relevant, as explained here.

⁶¹ A reason not discussed in this paragraph why duress may be relevant, in combination with price, concerns risk aversion. If a person in duress is in a bad financial situation (such as that he is desperate for funds to avoid foreclosure, as in *Capps*), then it is more important to give him the insurance provided by judicial oversight of the price than otherwise.

⁶² See generally Brice (2003), and ch. 5 on contracts for salvage; Gilmore and Black (1975), and §8-15 on contracts for salvage; and Norris (2003), and ch. 12 on contracts for salvage.

excessive, they are reduced to a fair level. *Magnolia Petroleum* is illustrative because the barge that was towed was in great danger and the \$15,000 contract price was a large multiple of the fair price. To determine the fair price in that case, the court took into consideration that the seas were not dangerous and that the tow was routine, so it used as its benchmark the normal towing rate of \$500 to \$600 a day. The actual way that the court calculated the award was generous: it employed \$700 as the daily rate, it next doubled this amount to obtain \$1,400, and it then added another \$300 for the several hours beyond one day that the tugboat spent, mainly preparing for the tow. Two other cases are useful to mention. In *Post v. Jones*, a whaling vessel, the *Richmond*, went aground near the Behring Strait a short time before winter ice would freeze her in.⁶³ The *Richmond*'s crew was rescued at little cost by other whalers fishing in the waters, the whale oil aboard her was transferred to these vessels, but the price they paid for the oil was small compared to its value. The court did not enforce the low contract price and stated that the *Richmond* should instead receive an amount for its oil based on the market price, after allocating a fraction of the oil to the salvors and giving them credit for freight. In *The Elfrida*, a ship went aground near the mouth of the Brazos River in Texas.⁶⁴ The *Elfrida* was not subject to an imminent risk but would have been vulnerable to loss if not released before a heavy storm came on. The *Elfrida* considered several bids from salvors for her refloating before accepting one, nine days after the grounding, for \$22,000, to be paid only upon success; the value of the ship was about four times this amount. The court enforced the contract at the agreed price, emphasizing that the contract was made with deliberation, when the *Elfrida* was not in immediate peril, and that the salvor's compensation was not assured because refloating her might not have been easy.

These cases help to illustrate not only the general point that the contract price may be replaced with a fair price when a vessel or her contents was at immediate and substantial risk – as in *Magnolia Petroleum* and *Post v. Jones* – but also the converse point that when a vessel is not in real jeopardy, the courts are less likely to intervene – as they refrained from doing in *The Elfrida*.⁶⁵ The cases also exemplify the principles used to determine the fair price. According to these principles, the fair price is supposed to reflect the time, expenses, and risks faced by the rescuing vessel, whether this vessel was a professional salvor (in which case courts tend to be more liberal), and the value and the risk faced by the vessel in distress.⁶⁶ In keeping with these principles, the court noted in *Magnolia Petroleum* and in *Post v. Jones* that there was no risk of failure or risk to the rescuing vessel, and hence no reason to increase the fair price on those accounts, whereas in *The Elfrida* the court stated that the risk of not succeeding in rescue did justify a higher price. Observe also that whether the rescuing vessel was a professional salvor is reflected by the generosity of the courts in calculating the price in *Magnolia Petroleum* (where,

⁶³ 60 U.S. 150, 19 How. 150 (1856).

⁶⁴ 172 U.S. 186, 19 S.Ct. 146 (1898).

⁶⁵ In the opinion in *The Elfrida*, the court stated on p. 206 that “Had the agreement been made with less deliberation or pending a peril more imminent, our conclusion might have been different.”

⁶⁶ See, for example, Norris (2003), ch. 12, §§ 164, 170 on the general factors determining a fair price, and ch. 6, §81, on the liberal compensation of professional salvors.

recall, the normal towage rate was more than doubled) and in *The Elfrida*. The value and risk faced by the vessel in distress was also taken into account by the court in the consideration of price in *The Elfrida*.

The economic interpretation of what has just been reviewed in the light of our analysis of holdup is as follows.⁶⁷ First, it makes obvious sense that the law should draw the distinction that it does between cases where vessels are in immediate peril and where they are not, since holdup is much more likely to be a problem when the peril is imminent. In the circumstances of *Magnolia Petroleum* and *Post v. Jones*, the vessels in distress did not have the ability or time to obtain bids for rescue and faced large expected losses, so were in classic bilateral monopoly situations. In *The Elfrida*, in contrast, the danger was not immediate and the ship was able to solicit and did consider different bids for refloating.

Second, the elements of the calculation of the fair price are economically rational in that they are likely to produce prices that would be sufficient to encourage contracting while preventing holdup prices. In particular, the time, expenses, and risk faced by the rescuing vessel need to be taken into account to generate a price acceptable to that vessel for contracting. The attention given by admiralty law to the value of the vessel in jeopardy also reflects economic logic, because of the beneficial incentives that are engendered if payments to rescuers depend on the value of the vessel and on success in rescue.⁶⁸ The relevance of whether the rescuing vessel was a professional salvor makes sense, since it is desirable for professional salvors to obtain higher prices (exceeding the marginal cost of rescue) to encourage them to remain in business and to invest in salvage equipment.⁶⁹ Additionally, it may well be that the generosity of the courts in calculating a fair price, such as in *Magnolia Petroleum*, is motivated in part by a desire to avoid chilling desirable contracts due to imperfect information about the minimum price necessary to induce contracting.

Legislation controlling price. Statutes regulating price may have a limiting effect on the possibilities for holdup, as a number of examples illustrate.⁷⁰

Many localities have imposed ceilings on prices that can be charged for towing disabled vehicles.⁷¹ This price regulation obviously restricts the possibilities for holdup,

⁶⁷ The general thrust of what follows is similar to that in Landes and Posner (1978), pp. 101-104; see also Buckley (1990), pp. 46-47, and Trebilcock (1995), pp. 87-90. .

⁶⁸ Awards for salvage, and contracts for salvage, are almost universally made only if the salvage effort was successful – on a “no cure, no pay” basis. See, for example, Gilmore and Black (1975), p. 535, and Norris (2003), ch. 7. (Presumably, the reason for the no cure no pay regime is that a contrary regime, under which a salvor is paid regardless of success, would be unworkable: salvors would be tempted to shirk, and it would be difficult to prove whether or not their effort was inadequate.) Given the no cure no pay regime, the salvor’s incentives to succeed are obviously improved, to the mutual benefit of the salvor and the vessel in need, if the payment to the salvor is greater the higher is the value of the vessel in need.

⁶⁹ This is also seen as the purpose of liberality in awards to professional salvors by courts; see Norris (2003), ch. 6, §81.

⁷⁰ Numerous other examples could be supplied. One that I omit is utility price regulation, which Goldberg (1976) explains can be viewed as protecting consumers and suppliers against holdup by each other.

and that is seen as one of its purposes. For instance, in reviewing tow truck regulations, a New York court stated that “an accident is ... no place for bargaining as to rates of charge. Clearly, the motoring public is at a disadvantage in such circumstances and it is then that the unscrupulous take unfair advantage.” At the same time, this court did not endorse price regulation for towing in non-emergency situations or for repair or storage, contexts in which holdup is presumably not much of a problem.⁷²

Another example of maximum price regulation is that which requires hotels to post their undiscounted room rates.⁷³ This regulation prevents hotels from engaging in classic holdup, for instance, raising their rates excessively on the spot for a person who comes in at a late hour and appears to strongly need a room.

An additional example, of significant historical importance as a form of maximum price regulation in Europe throughout the Middle Ages, concerns the principle of *laesio enormis*, holding that if a price in a contract or exchange exceeded 150% of the “just price,” the agreed price would be voided and the just price substituted.⁷⁴ The just price was taken to be essentially the general market-determined price.⁷⁵ Hence, the principle of *laesio enormis* functioned to prevent holdup, and this was intended. Scholars of just price state that an opinion of the times was that sellers should not be able to take advantage of a buyer’s special need.⁷⁶

It seems, then, that preventing holdup has been a rationale of many regulations that place upper limits on price. However, it should be noted that such regulations

⁷¹ See, for instance, NEW YORK CITY, N.Y. ADMIN. CODE § 20-509, stating that “charges for the towing of vehicles shall not exceed fifty dollars for the first mile or fraction thereof and four dollars for each additional mile or fraction thereof...,” or PHILA., PA., CITY CODE § 9-605(6)(a), stating that “The maximum fee a tower may charge for towing a disabled vehicle is forty (40) dollars, and two (2) dollars per mile during normal work hours of 6:00 a.m. to 7:00 p.m. and fifty (50) dollars and two (2) dollars per mile for evenings, weekends and holidays...” I owe the example of the towing of disabled vehicles to Daniel Kelly, who wrote an excellent student paper about it.

⁷² *Richard’s Serv. Station, Inc. v. Huntington*, 361 N.Y.S.2d 497 (1974), *modified on other grounds*, 367 N.Y.S. 2d 296 (2d Dep’t 1974). The court also observed that “Tow truck operators are not regulated as to rates in non-emergency situations....”

⁷³ See, for example, *Cal. Civ. Code* § 1863 (2004), *Fla. Stat.* § 509.201 (2004), *N.Y. C.L.S. Gen. Bus.* § 206 (2004), and *Tex. Occ. Code* § 2155.001 (2004).

⁷⁴ See Baldwin (1959), Dawson (1937), pp. 365-370, de Roover (1958), and Gilchrist (1969), pp. 58-62. The principle of *laesio enormis* originally protected only sellers of land from receiving less than half its market value but was generalized over the course of time; see especially Baldwin (1959).

⁷⁵ The view that the just price was instead the fair price, primarily reflecting embedded labor, was refuted in the monograph by Baldwin (1959), which has generally been accepted by scholars as authoritative; de Roover (1958) is in the same vein.

⁷⁶ For example, Baldwin (1959), p. 33, notes that “Sellers ... qualified for ... protections...when they could demonstrate unusual distress in their situations.” De Roover (1958), p. 426, described the views of an influential fifteenth century commentator, San Bernardino of Siena, in this way: “[N]o one is allowed ... to take advantage of a buyer’s ...special need.” Gilchrist (1969), p. 61, writes “The unjust price took advantage of some ‘weakness’ or necessity on the part of the buyer or seller....”

presumably have another function as well, namely, preventing those who are ignorant of the market price from being charged too high a price.

Two more examples of price regulation will be mentioned, which are different from the preceding because they effectively set prices rather than only limit prices. The first concerns taxi rates, which are usually mandated.⁷⁷ Hence, taxi drivers do not have the discretion to engage in holdup, such as of a person who urgently needs to be taken to the hospital. Although it is desirable that taxi drivers be prevented from holding up customers who have pressing needs for a ride, the regulation of taxi rates is of course undesirable because it interferes with the classic allocative function of market prices.⁷⁸ It would seem preferable, for instance, to allow taxi rates to rise when bad weather or convention business increases the overall demand for taxis, leading to the unavailability of taxis at the controlled rates. If flexibility in taxi rates could be effected without giving too much discretion to raise rates to individual drivers, rates could vary with market conditions but holdup of particular individuals could still be curtailed.

The other example is of statutes that prevent prices from increasing in the aftermath of emergencies. Florida, for instance, passed legislation following Hurricane Andrew prohibiting the charging of “excessive” prices during a declared state of emergency, and other states have enacted similar legislation.⁷⁹ The Florida legislation stipulates that prices not deviate substantially from the average price in the month immediately prior to the declared emergency.⁸⁰ The legislation was recently applied, after Florida was struck by hurricanes over the summer of 2004, to stem what was described as gouging by sellers of many products and services, for instance, for gasoline, generators, pumps, chain saws, and hotel rooms.⁸¹ This regulation prevents holdup of single individuals due to their particular circumstances, such as a motorist who runs out of gas as he pulls up to a gas station or a person who urgently needs a pump to prevent flooding

⁷⁷ These may be found on the websites of many cities. For example, for Boston, see www.ci.boston.ma.us/transportation/cabs.asp; for Chicago, see <http://egov.cityofchicago.org>, and navigate to “Liveries and Taxis”; for New York City, see http://www.nyc.gov/html/tlc/html/passenger/taxicab_rate.shtml. The only variation in rates seems to be according to the time of day. For instance, in New York City rates involve a \$1.00 surcharge Monday through Friday from 4:00 P.M. to 8:00 P.M. and an evening surcharge of \$.50 after 8:00 P.M.

⁷⁸ The control of prices is also undesirable due to the fact the supply-related function of price. I am here, though, assuming that the quantity of taxis is regulated, and discussing allowing the rate to vary to clear the market given the quantity of taxis...

⁷⁹ See *Fla. Stat.* § 501.160 (2003) and, for example, *Ark. Code* § 4-88-303 (2003), *Conn. Gen. Stat.* § 42-230 (2003), and *N.J. Stat.* § 56:8-109 (2004). Emergency price regulations are also sometimes adopted in wartime. During World War II, the United States enacted the Emergency Price Control Act of 1942, about which much of what will be said here would apply.

⁸⁰ The deviation that would result in a sanction is not defined numerically under the Florida legislation, but it is in some other states. For example, in Arkansas, a deviation would be sanctioned if it exceeded by 10% the average price in the previous month.

⁸¹ For example “Price gouging in Florida: 10,000 to remove a tree,” by Joseph B. Treaster, *The New York Times*, August 18, 2004, reported prices of \$3.00 per gallon of gasoline instead of the prior price of \$1.78, \$2,000 for a generator instead of \$250, \$109 for a room at a motel instead of \$39.99. The story also mentioned a man with a chain saw who offered to clear an oak tree from a person’s roof for \$10,500.

that would destroy valuable property. But the regulation obviously suffers from the problem that it compromises the general allocative and production-related social advantages of allowing price to respond to changes in overall demand and supply conditions. If, following a Florida hurricane (causing an increase in demand and a reduction in supply of many goods and services), the price of gasoline rises from \$1.78 per gallon to a new market level of \$3.00 per gallon, the allocation of gasoline will be improved because only those individuals who place a relatively high value on gasoline will purchase it (such as hospital workers). When gasoline prices are controlled, however, gasoline stocks will be exhausted (as happened at many gas stations in Florida⁸²), so that individuals who were not lucky enough to have purchased it cannot do so, no matter how much they would value it. Regarding supply effects, one might imagine that, if gasoline prices were permitted to rise in Florida, more gasoline would have been trucked in from Georgia, and so forth. These textbook effects of emergency price controls seem to have been overlooked by the authors of the regulation. A motivation for the regulation appears to be to help the mass of individuals from having to pay higher prices after an emergency.⁸³ This motivation is different from, and should not be conflated with, the objective of preventing holdup of single individuals whose demand for a good or a service is much greater than that of the mass of individuals.

5. Discussion

I remark here on a number of issues relating prevention of holdup as a rationale for legal intervention in contracts to economic theory and to recent literature on contracting.

Prevention of holdup as a major justification for legal intervention in contracts. There are two standard reasons for legal intervention in contracts. One is that a party to a contract may lack information about the good or service in question. This possibility could justify voiding contracts (as for fraud) or such policies as required disclosure or minimum product quality constraints. The other basic reason for legal intervention in contracts concerns externalities. Notably, if contracts would generate negative externalities, that could call for their cancellation, taxation, or limitation.

To these broad justifications for legal intervention in contracts, it seems that prevention of holdup ought to be added, in the light of sections 3 and 4. Holdup, note, is a problem that is independent of lack of information and externalities. (The problem faced by a ship in distress need not involve any informational asymmetry between the ship and her rescuer nor any externality.) Moreover, the problem of holdup seems to be of sufficient empirical importance (consider the significance of modification of contracts) to justify its being added to the two standard rationales.

Although problems of holdup are common, they warrant legal intervention in contracts only in a restricted class of situations. On reflection, the problems associated with holdup pertain to some degree to virtually all contracts made in contexts possessing

⁸² See "Price Gouging Saves Lives" by David M. Brown, August 17, 2004, at dmb1000@juno.com.

⁸³ If it were thought that the implicit insurance benefit of holding down prices outweighed the losses due to interference with the allocative and productive effects of permitting a price rise, the regulation might be defended.

an element of bilateral monopoly. Consider, for instance, even such a mundane transaction as the sale of a piano by a person who plans to move to another city in a month. That this person might be under some pressure to sell could allow a buyer to obtain a favorable price. And the prospect of having to sell his piano at a relatively low price might lead to inefficient behavior, for instance, his spending to transport the piano to the other city when it would be socially better for him to purchase a replacement piano there. But the notion that judicial intervention in contracts to sell pianos when people have to move to another city in a month would be socially desirable is not appealing. The problems of holdup for such transactions seem modest or less than that, and the information courts would need to be able to justify voiding these contracts on the basis of price very likely exceeds that which the courts possess. It appears that legal intervention is defensible only in quite different circumstances, only when holdup problems exceed a fairly pronounced threshold of substantiality, when courts have sufficient information to determine a useful remedy. This view comports with reality in that, as has been described here, legal intervention does seem restricted to circumstances of significant holdup.

Holdup (and the related need for legal intervention in contracts) may be viewed as a consequence of parties' inability to contract at an earlier time. Holdup in the making of fresh contracts and the problems associated with it would not arise if the victims and the beneficiaries of holdup were able to meet and contract at an earlier time, before situations of need might eventuate. If, for example, ships that might need rescue were to contract at the beginning of the year with professional salvors who might give aid, it would be in their mutual interest to stipulate reasonable prices for aid (or to arrange prepayment) in order to eliminate the costs and the risk that would otherwise be induced by the anticipation of holdup. Such contracting is usually impractical, though, because there are so many parties who would have to be involved in the ex ante contracts. Hence, one might view the problem of contractual holdup and the possible desirability of legal intervention in fresh contracts as a byproduct of the inability of parties to contract at a prior time.⁸⁴

This point is illustrated in a converse way by an example in which parties are able to contract ex ante, before holdup might occur, and where they do thereby prevent subsequent holdup. The example, as mentioned in the introduction, is that of the American Automobile Association (AAA) as it relates to towing service. Members of the AAA avoid holdup when they need towing service because the AAA contracts with tow truck companies across the country to provide tows to its members.⁸⁵ In effect, via the

⁸⁴ This point obviously does not apply to holdup in the context of modification of a contract, for the initial contract is a contract that was made prior to the time of holdup. But one can view the holdup problem in the modification context analogously, as flowing from the inability to make a complete initial contract.

⁸⁵ As described at www.aaa.com, if an AAA member needs roadside assistance, he or she must call one of the 13,000 garages under contract with the AAA. The service provider from such a garage will then attempt to remedy the problem (for instance, by changing a flat tire) without a fee (except that up to \$50 may be charged for lockout and key-related difficulties). If the car is still not functional, a free tow to the service provider's garage or the nearest AAA garage is provided at no cost. The AAA member may also elect to have the car towed to a different destination, in which case, in New England, the member will not be charged for the first three miles, and will only be charged a fixed rate of \$3 per mile after the third mile (the number of free miles and the rate applied thereafter may vary according to the region of the country).

medium of the AAA, drivers and tow truck companies contract ex ante to avoid the holdup problem. Thus, in the case of tow truck service, we can see ex ante contracting as well as contract law and maximum price regulation at work to control the holdup problem.

Holdup in the economics contracting literature. Holdup is emphasized in two general respects in the contracting literature of economics. First, prevention of holdup is viewed as a *raison d'être* for contracting. Notably, by contracting and specifying price, parties can avoid the problem of subsequent holdup and dilution of incentives to invest.⁸⁶ If a nightclub owner advertises the appearance of a singer at his establishment but does not have a contract with the singer, she can charge through the nose after he advertises and thus appropriate part of the value of the advertising. That would inefficiently dull the incentive to advertise, but can be avoided by making a contract in which the price is set in advance. This explanation for contracting is essentially the same as the justification for legal intervention in fresh contracts discussed here, since legal intervention can be seen as an attempt to control the price in the manner the parties might have specified in an earlier hypothetical contract.

Second, and related, because contracts are incomplete and will often be renegotiated as a consequence, price is in reality frequently not effectively set, so that the problem of holdup reemerges when contracts are modified.⁸⁷ This modification holdup problem can sometimes be alleviated or cured by the use of mechanisms to guide modification⁸⁸ or, in a different vein, by the integration of the contracting parties' activities into a firm.⁸⁹ Legal intervention to prevent holdup in modifications, such as is discussed in this article, has not been examined to my knowledge in the economics contracting literature. One reason is that it has been assumed in most models that the courts have very little information about the contractual environment and outcomes, so that they would not be able to intervene beneficially.

Legal enforcement of modifications and of mechanisms that would govern renegotiation. Several comments about the operation of the legal system bear on the economics contracting literature on modification. The first comment is simply that the law does not necessarily enforce modifications, as has, of course, been one of the themes of section 4, whereas in the contracting literature it is generally assumed that the law routinely enforces modifications.

The second comment is that it appears that contractually-specified mechanisms that would guide renegotiation are enforceable, an observation of obvious relevance for the contracting literature. To amplify, parties can probably have a named mechanism

⁸⁶ For early formalizations of holdup and dilution of incentives, see Grout (1984) and Rogerson (1984).

⁸⁷ For general treatments, see Bolton and Dewatripont (2005), chs. 11 and 12, and Hart (1995); and see the model of contracts introduced in Hart and Moore (1988).

⁸⁸ See Bolton and Dewatripont (2005), ch. 12, and, for example, Aghion, Dewatripont, and Rey (1994), Che and Hausch (1999), Chung (1991), Edlin and Reichelstein (1996), Nöldeke and Schmidt (1995), Schwartz and Watson (2004), and Tirole (1999).

⁸⁹ See Grossman and Hart (1986), Klein, Crawford, and Alchian (1978), and Williamson (1985).

enforced by the law if they specify that an arbitrator is to implement the mechanism. The legal system is generally bound to enforce decisions of arbitrators, whether or not those decisions conform with the contract law that would be applied by the courts.⁹⁰ However, the question may be asked whether courts, as opposed to arbitrators, would enforce a contractually specified mechanism. The answer is not clear. It is true that courts will not enforce a clause barring modification of a contract,⁹¹ but this does not imply that courts would not enforce a mechanism that would merely control the renegotiation process giving rise to a modification – perhaps they would.

Actual use of mechanisms to control renegotiation. Examples of contractually specified mechanisms that would control renegotiation seem to be unusual. One of the few of which I am aware is a clause that parties sometimes employ in construction contracts stating that if, due to an unanticipated circumstance, the parties want to make a change and cannot agree on a new price, the price adjustment should equal the cost difference due to the change plus an allowance for reasonable profit.⁹² However, I have not encountered any reference to contractual provisions that would guide or constrain modification in the many cases concerning modification that I have read or in legal commentary. If this preliminary observation about the rarity of use of modification-governing mechanisms in contractual practice is borne out by empirical investigation, it will call for explanation. A possible avenue is that, as suggested in section 3, it would be difficult for parties to describe in advance how modifications should be regulated and that the policing of modifications accomplished by courts is tolerably good.

⁹⁰ See Goldberg, et al. (1992), pp. 201-202, stating that the Federal Arbitration Act (FAA) generally displaces state law, that the FAA and the Uniform Arbitration Act (which has been adopted in almost every state) vest courts with jurisdiction to enforce arbitration decisions, that a court may deny enforcement of an arbitration decision only under restrictive circumstances, and citing affirming decisions of the U.S. Supreme Court.

⁹¹ The *Restatement of Contracts 2nd*, §311, Comment a, states “The parties to a contract cannot by agreement preclude themselves from varying their duties to each other by subsequent agreement.” Also, in *Beatty v. Guggenheim Exploration Co.*, 225 N.Y. 380, 122 N.E. 378, (1919), the court said “Those who make a contract, may unmake it. The clause which forbids a change, may be changed like any other.” This point is stressed by Jolls (1997).

⁹² This example is described in Bajari and Tadelis (2001), p.391, which refers to American Institute of Architects (AIA) document A201. Not surprisingly, it seems designed to prevent substantial holdup.

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