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Commercial Rationality and the Duty to Adjust Long-Term Contracts

Clayton P. Gillette

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INTRODUCTION

Two parties voluntarily enter into a long-term agreement for the sale of goods.[1] Each party presumes the agreement serves its particular interests. Subsequently, an event occurs that is not expressly provided for in the agreement, rendering the agreement far more beneficial to one party and far less beneficial to the other than either anticipated.[2] The disadvantaged party seeks to avoid performance by invoking any of the several contract law doctrines that address this situation: frustration of purpose, mistake, impossibility, or impracticability.[3] What ought to be done?

Common law courts traditionally construed these doctrines narrowly, so the disadvantaged party's request for relief usually failed.[4] The Uniform Commercial Code (UCC), however, purports to set forth circumstances under which a disruptive event such as the one described above would excuse the disadvantaged party. In section 2-615, the UCC conditions excuse on the

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1. The definition of a "long-term contract" will vary according to the context of the transaction; for purposes of this Article, a long-term contract is one in which a commercial seller agrees to supply goods to a commercial buyer over a substantial period of time.

2. It is possible, of course, that only one of the parties will be surprised by the intervening event. *See infra* text accompanying notes 39-40.

3. Technical differences exist between these doctrines. *See* Transatlantic Fin. Corp. v. United States, 363 F.2d 312, 315 (D.C. Cir. 1966). These differences are not relevant to the present discussion. The Uniform Commercial Code adopts the more flexible commercial impracticability standard. *See* U.C.C. § 2-615 comment 3; *infra* notes 5-9 and accompanying text. Unless otherwise noted, all U.C.C. citations in this Article are to the 1978 official text.

4. The *de rigueur* citation here is Paradine v. Jane, 82 Eng. Rep. 897 (K.B. 1647). *See also* A. CORBIN, CONTRACTS § 1320 (1975); E. FARNSWORTH, CONTRACTS § 9.5 (1982).

parties' failure to allocate the risk that the disruptive event might materialize,[5] their assumption that the event would not occur,[6] and the impracticability of performance after materialization of the event.[7] The accepted wisdom of students of the UCC is that section 2-615 was intended to provide the courts more flexibility to excuse performance.[8] Numerous commentators have welcomed this development, arguing that the circumstances considered by the UCC mandate appropriate relief for the party aggrieved by the "unforeseen" or "unanticipated" event.[9]

Beyond this, several commentators have urged greater liberalization of remedies in case of such an event. Rather than simply allowing avoidance of performance, some have proposed a more flexible right to withhold performance pending modification of the original contract to reflect a sharing of the benefits and burdens generated by the disruptive event.[10] Although the arguments for excuse and modification may differ, the thrust of each claim is the same: the law ought to require the advantaged party to adjust the original agreement.

Courts, however, have demonstrated singular resistance to

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5. The risk need not be expressly allocated; the U.C.C. recognizes that allocations of risk may be "found not only in the expressed terms of the contract but in the circumstances surrounding the contracting, in trade usage and the like." U.C.C. § 2-615 comment 8.

6. The nonoccurrence must be a "basic assumption on which the contract was made." U.C.C. § 2-615(a).

7. *See* U.C.C. § 2-615(a); Note, *U.C.C. Section 2-615: Excusing the Impracticable,* 60 B.U.L. REV. 575, 577-78 (1980).

8. *See* U.C.C. § 2-615 comments 3, 4; J. WHITE & R. SUMMERS, UNIFORM COMMERCIAL CODE § 3-9, at 128 (2d ed. 1980); 1 STATE OF NEW YORK LAW REVISION COMMISSION, STUDY OF THE UNIFORM COMMERCIAL CODE 352 (1955).

9. *See* Duesenberg, *"Impossibility": It Isn't Good Code Language,* 1 J.L. & COM. 29, 42-46 (1981); Tannenbaum, *Commercial Impracticability Under the Uniform Commercial Code: Natural Gas Distributors' Vehicle for Excusing Long-Term Requirements Contracts?,* 20 HOUS. L. REV. 771, 776-99 (1983); Comment, *Loss Splitting in Contract Litigation,* 18 U. CHI. L. REV. 153, 153-54 (1950); Comment, *Apportioning Loss After Discharge of a Burdensome Contract: A Statutory Solution,* 69 YALE L.J. 1054, 1074 (1960).

10. *See* Harrison, *A Case for Loss Sharing,* 56 S. CAL. L. REV. 573 (1983); Speidel, *Court-Imposed Price Adjustments Under Long-Term Supply Contracts,* 76 NW. U.L. REV. 369 (1981) [hereinafter cited as Speidel, *Supply Contracts*]; Note, *supra* note 7, at 596-99; Comment, *Equitable Reformation of Long-Term Contracts—The "New Spirit" of* ALCOA, 1982 UTAH L. REV. 985. Judicial support for this position is typically sought in the case of Aluminum Co. of America v. Essex Group, Inc., 499 F. Supp. 53 (W.D. Pa. 1980), the single, and singular, case in which the court used § 2-615 to impose such a remedy. *See* Speidel, *Supply Contracts, supra*; *see also* Speidel, *The New Spirit of Contract,* 2 J.L. & COM. 193 (1982).

the arguments for adjustment. The case law under section 2-615 demonstrates that courts have, with rare exceptions,[11] rejected claims for adjustment of contractual terms because of intervening events.[12] Instead, they have resolved the ambiguity inherent in phrases such as "impracticable," "foreseeable," or "basic assumption" against the parties seeking adjustment. Certainly this has been the case when the parties are commercial actors rather than consumers and when there is no hint that overreaching by the advantaged party infected the original bargaining process.

I suggest in this Article an explanation, and in large part a justification, for the courts' reluctance to embrace the theories of adjustment. My argument reflects a substantial doubt, which I believe is shared by the decisions, that the imposition of a duty to adjust mirrors commercial reality, social utility, or individual right. I recognize, as do advocates of a duty to adjust, that contractual expression is necessarily fragmentary due to the incapacity of commercial actors to foretell completely events that might disrupt original expectations.[13] My disagreement with adjustment advocates lies in the conclusions that fol-

11. *See, e.g.*, Asphalt Int'l, Inc. v. Enterprise Shipping Corp., 667 F.2d 261 (2d Cir. 1981) (owner of tanker not obligated to repair vessel when cost of repair prohibitive); Waldinger v. Ashbrook-Simon-Hartley, Inc., 564 F. Supp. 970 (C.D. Ill. 1983) (where engineer's specifications made supplier's product restrictive and noncompetitive, defendant was excused from performance); Sunflower Elec. Coop., Inc. v. Tomlinson Oil Co., 7 Kan. App. 2d 131, 638 P.2d 963 (1981) (where agreement to sell natural gas was expressly limited to that of a certain well and that well was shown to be exhausted, sale of gas under the contract was excused); Campbell v. Hottstetter Farms, Inc., 251 Pa. Super. 232, 380 A.2d 463 (1977) (delivery of grain excused where contract was for farmer's estimated capacity and weather made crop fall short); Process Supply Co. v. Sunstar Foods, 38 U.S.D.A. 747 (U.S. Dept. Agric. 1979) (compliance with an order of state police regarding severe weather conditions excused delay in delivery).

12. *See, e.g.*, Kerr-McGee Corp. v. Northern Util., Inc., 673 F.2d 323, 328-30 (10th Cir. 1982); Fratelli Gardino, S.p.A. v. Caribbean Lumber Co., 587 F.2d 204, 206 (5th Cir. 1979); Louisiana Power & Light Co. v. Allegheny Ludlum Indus., 517 F. Supp. 1319, 1323-26 (E.D. La. 1981); Eastern Air Lines, Inc. v. Gulf Oil Corp., 415 F. Supp. 429, 437-42 (S.D. Fla. 1975); Publicker Indus., Inc. v. Union Carbide Corp., 17 U.C.C. Rep. Serv. (Callaghan) 989, 992-93 (E.D. Pa. 1975); Sunflower Elec. Coop., Inc. v. Tomlinson Oil Co., 7 Kan. App. 2d 131, 138-39, 638 P.2d 963, 969-70 (1981); Schafer v. Sunset Packing Co., 256 Or. 539, 542, 474 P.2d 529, 530 (1970); Robberson Steel, Inc. v. J.D. Abrams, Inc., 582 S.W.2d 558, 564 (Tex. Civ. App. 1979).

13. This view is implicit in all the literature of adjustment. It is explicit in Macneil, *The Many Futures of Contracts*, 47 S.C.L. REV. 691, 726-27 (1974), and Farnsworth, *Disputes Over Omission in Contracts*, 68 COLUM. L. REV. 860, 869-70 (1968).

low from this premise. From my perspective, the adjustment arguments assume a view of rational commercial behavior that understates the ability of commercial actors to engage in conduct for which they can be considered, from an ethical or behavioral perspective, responsible. I argue that even if commercial actors cannot foretell the occurrence of events, they can plan rationally with the inevitable uncertainty of the future in mind to estimate and control the consequences of those events. If a commercial actor is able to bargain with uncertainty in mind, I suggest the law ought to consider a such bargain the product of a cognitive and analytical process for which the actor can be held accountable, notwithstanding the intervention of specific events that the actor did not predict. The failure of the law to respect decisions made under these circumstances is unjustifiably paternalistic towards individual actors and frustrates individual effort that would otherwise generate greater personal and social welfare. I therefore reject recent commentary that views contract necessarily as a communitarian exercise and instead adopt a conception of contract as a mechanism for individual expression by commercial actors capable of considering and bearing the consequences of reasoned choice.

In Part I, this Article proposes a model of decision making that suggests commercial actors are able to bargain rationally concerning "unforeseen" events. The model, therefore, militates against any duty to adjust based on the incapacity of the parties to foretell the future. Part II examines the arguments for a duty to adjust and elaborates the nonadjustment model in light of these arguments, concluding that the principles of relationalism and desert on which advocates of adjustment rely cannot adequately support the imposition of a duty to adjust. Finally, Part III discusses the absoluteness of the nonadjustment model to determine whether the imposition of a duty to adjust might be appropriate in certain situations.

I. THE NONADJUSTMENT MODEL

A. SOME PRELIMINARY INQUIRIES: "RATIONALITY" AND THE SIGNIFICANCE OF A RULE

1. Rationality

The first preliminary inquiry that must be made before investigating the propriety of a duty to adjust is the nature of rationality. Central to this Article is the concept that actors are capable of reaching a rational decision or engaging in a rational bargaining process. Rationality obviously does not equal optimality of result, because decision making in ignorance of the future will lead to suboptimal results in some, indeed many, cases.[14] For purposes of this Article, a "rational" decision or bargaining process is one in which the decision maker determines a course of action only after obtaining a minimum level of information concerning possible acts and consequences and having adequate time to consider their desirability.[15] It is difficult, especially prior to laying out the argument, to define with precision both the minimum level of information and the requisite time for detached reflection that would qualify as "rational."[16] Obviously, a rational decision reached today concerning next year's oil prices will be based on different and less complete information than a rational decision concerning tomorrow's oil prices. Similarly, if no decision that is made without time to discover all relevant information can be recognized as rational, any guess, whether informed, probabilistic, or otherwise, is doomed to the realm of the irrational. Thus, as rationality can only be determined in context, for now it is perhaps best understood by its consequences: a rational decision is a decision that a court should not override on the basis that the decision maker was deprived of the ability to make a meaningful choice.

2. Significance of a Rule

The second preliminary inquiry is whether the imposition of an obligation to adjust makes a difference in the ultimate bargain reached by the parties. General principles of commer-

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14. If commercial actors "rationally" plan for a contingency, they will discount the effects of the contingency by the probability of its occurrence. The value of the actual state of affairs, however, will always diverge from the value of that "rationally" expected state of affairs. Because the contingencies either will or will not arise, an actor with perfect information would have assigned a probability of 1.0 or 0 to the contingency rather than discounting it by something in between. *See* Goetz & Scott, *Principles of Relational Contracts*, 67 VA. L. REV. 1089, 1099-1100 (1981).

15. The possibility that the decision maker can engage in deliberation is the focus of the definition. *See* R. JEFFREY, THE LOGIC OF DECISION 1 (2d ed. 1983).

16. The allusion here is to Justice Holmes's implication that legal rules may depend on the ability of actors to consider the consequences of their actions. Reasonable conduct thus may vary with the circumstances: "Detached reflection cannot be demanded in the presence of an uplifted knife." Brown v. United States, 256 U.S. 335, 343 (1921).

cial law permit parties to bargain for any clause they wish,[17] and UCC section 2-615 permits parties to allocate losses as they desire with respect to unforeseen events.[18] Assuming that the actors are commercial parties of relatively equal bargaining power, they will presumably allocate risks to minimize the expected loss from such risks. If an existing rule of law does not reflect that allocation, the parties will voluntarily contract out of that rule.[19] Under these circumstances, the favored rule of law is the one that the parties would reach in most transactions through independent bargaining. The law then minimizes transaction costs by making such bargaining unnecessary in a majority of cases.[20] Thus, some may argue that the substantive rule of law is irrelevant except insofar as it coincides with or diverges from the rule dictated by efficient exchange.

Even if one accepts this transaction-cost model for contract law generally, however, it does not necessarily follow that the substantive rule of law is irrelevant in adjustment cases. *Some* rule of law is necessary to fill the gap when parties have not expressly allocated a risk. The transaction-cost model assumes that the gap is best filled by a rule reflecting what parties would choose in most cases if left to their own devices. As indicated below,[21] however, no such majority or strong plurality rule exists with respect to disruptive events. Instead, there are a wide variety of risk-allocation devices, none of which appears to dominate or can be fairly said to represent what parties would have chosen in most cases. Instead, allocations appear to be specific to particular industries or particular bargains.[22] Consequently, no rule is necessarily advantageous in reducing transaction costs, and the gap-filling rule must serve some societal objective other than the elusive goal of efficient exchange.[23]

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17. *See, e.g.,* U.C.C. § 1-102(3).

18. *See* U.C.C. § 2-615.

19. *See* Joskow, *Commercial Impossibility, The Uranium Market and the Westinghouse Case,* 6 J. LEGAL STUD. 119, 150 (1977).

20. A. SCHWARTZ & R. SCOTT, COMMERCIAL TRANSACTIONS: PRINCIPLES AND POLICIES 20 (1982); Joskow, *supra* note 19, at 150; Kronman, *Paternalism and the Law of Contracts,* 92 YALE L.J. 763, 766 (1983).

21. *See infra* text accompanying notes 142-54.

22. *See, e.g.,* Iowa Elec. Light & Power Co. v. Atlas Corp., 467 F. Supp. 129, 134 (N.D. Iowa 1978) (parties to uranium supply contract had allocated the risk of unforeseeable price fluctuations), *rev'd on other grounds,* 603 F.2d 1301 (8th Cir. 1979), *cert. denied,* 445 U.S. 911 (1980); Eastern Air Lines, Inc. v. Gulf Oil Corp., 415 F. Supp. 429, 441-42 (S.D. Fla. 1975) (volatility of oil market and threat of oil embargo was foreseen and bargained for).

23. *See* Schwartz, *The Case for Specific Performance,* 89 YALE L.J. 271,

Moreover, the failure of most parties to bargain out of the existing rule allocating risks, UCC section 2-615, does not necessarily imply that the allocation dictated by that section provides the optimal result. Even assuming that parties understand that section 2-615 will govern if the contract is silent on the issue of impracticability,[24] acceptance of section 2-615, either explicitly or by silence, does not mean the parties would have bargained to such a provision had section 2-615 not existed. If they were writing on a clean slate, the parties might have chosen some alternative risk allocation provision. In the absence of the "presumptive" allocation of the UCC, a party may consider excuse, or excuse under the circumstances provided by section 2-615, to be a second-best solution. Given the existence of section 2-615, however, the cost of bargaining to that allocation is minimal; all one need do is remain silent. The additional cost of bargaining to the first-best solution may exceed the expected marginal gain from that solution. In effect, therefore, the existence of a state-imposed, presumptive gap filler that permits excuse may predetermine what allocation will be chosen by the parties.

B. THE ASSUMPTIONS OF THE MODEL

1. Minimal Externalities

The nonadjustment model rests on three assumptions, the latter two of which are noncontroversial in the context of current commercial practice. The model first assumes that the contract does not impose significant costs on nonparties, that is, that there are minimal externalities. Because long-term contracts can result in substantial external effects, this assumption must eventually be relaxed.[25] Beginning the analysis with the assumption, however, permits focusing on the assertion underlying the argument for adjustment, that the parties suffer from

283-84 (1979). Professor Alan Schwartz suggests that there may evolve certain recurring situations in which a specific optimal adjustment rule dominates. In such a case, a court may, with some confidence, apply that adjustment rule where the recurring fact pattern exists and the parties have been silent. *See* Ehrlich & Posner, *Economic Analysis of Legal Rulemaking,* 3 J. LEGAL STUD. 257, 266 (1974). The proper analogy seems to be the derivation of a standard of reasonable care from a custom that evolves from a bargain. *See* R. POSNER, ECONOMIC ANALYSIS OF LAW 125-26 (2d ed. 1977).

24. For an interesting account of the familiarity of business administrators of long-term supply contracts with legal principles that underlie their obligations when disruptive events occur, see White, *Contract Law in Modern Commercial Transactions, An Artifact of Twentieth Century Business Life?,* 22 WASHBURN L.J. 1, 14-18 (1982).

25. *See infra* text accompanying notes 207-15.

limited rationality.[26] The duty to adjust is rarely defended on the grounds that changed circumstances adversely affect nonparties;[27] the argument is instead that adjustment is necessary to vindicate the interests of the parties themselves. The assumption of minimal externalities thus is appropriate, at least for a statement of the outer boundaries of the nonadjustment model.

2. Self-Interested Actors

The model also assumes that commercial parties are self-interested, that is, that each party values what it receives in the exchange more than what it surrenders.[28] In the case of a long-term agreement, each party believes that such an arrangement will produce more beneficial results—a steady source of goods for the buyer and a regular market for the seller, at predictable prices—than the alternative of entering the market to purchase or sell on a regular basis over the term of the contract.[29] Each

26. *See infra* text accompanying notes 68-83.

27. See Schlegel, *Of Nuts, and Ships, and Sealing Wax, Suez, and Frustrating Things—The Doctrine of Impossibility of Performance,* 23 RUTGERS L. REV. 419, 445 (1969), for a rare, albeit brief, statement of concern for the external effects of disruptive events.

28. Use of the neuter "it" recognizes that the commercial actors with which this Article is concerned are typically firms rather than individuals. This fact makes speaking in terms of the rationality of the actor awkward, because decisions typically emerge after input from a variety of individuals who act on behalf of the firm. The decision of the actor, therefore, may be a compromise of a disputed decision within the firm itself. Moreover, the decision may be skewed from what the firm, acting in the interest of its owners, would consider rational, because the persons acting on behalf of the firm make choices out of self-interest rather than out of the interests of the owners. Nevertheless, those decisions are treated as rational decisions for the firm since the reduction of divergence between managerial self-interest and interest of the firm lies within the realm of corporate law and intracorporate contracts and does not require other parties to monitor the firm's intracorporate structure. *See* Fama, *Agency Problems and the Theory of the Firm,* 88 J. POL. ECON. 288 (1980); Jensen & Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure,* 3 J. FIN. ECON. 305 (1976).

29. *See, e.g.,* Eastern Air Lines, Inc. v. Gulf Oil Corp., 415 F. Supp. 429, 432 (S.D. Fla. 1975). In a recent draft of a paper on long-term contracts, Professor Victor Goldberg suggests that parties enter such contracts to achieve the benefits of cooperation rather than to avoid risks of future price changes. *See* Goldberg, Price Adjustment in Long-Term Contracts (forthcoming) (copy on file with the author). No single explanation, however, seems to cover all cases. A party may enter the contract to avoid risks, to obtain the benefits of cooperation, or to gamble on a belief about future price changes. Indeed, the variety of possible explanations supports the argument that parties should be permitted to strike a bargain that reflects their motivations for entering into the contract, free from concern that courts may subsequently require adjustment.

party may avoid market fluctuations during the contract's term and the costs of negotiating serial contracts at spot prices. In addition, participation in long-term arrangements may facilitate a party's ability to obtain loans or otherwise alter its capital structure by demonstrating long-term viability.[30] Although some commentators question the desirability of a norm of self-interest in commercial pursuits,[31] this assumption seems justified in light of current practice.[32]

3. Three Conditions of Decision Making

Finally, the model assumes that in negotiating the terms of a contract, each actor is faced with a "decision problem,"[33] that is, the actor must choose one clause among several possibilities to form each term of the contract. At the negotiation stage, an actor will have varying degrees of knowledge about the subsequent consequences of choosing a specific term. The actor may believe it has full and accurate knowledge of the consequences of some clauses,[34] so that a choice of whether to bargain for one of them is made under a condition of *certainty*. Alternatively, the actor may have knowledge of a range of consequences that may follow from a specific choice and be able to assign a probability to each potential consequence, so the actor can make its choice under a condition of *risk*. Finally, the actor may recognize that the limited mental capacity of the human organism[35] renders it unable to consider all potential conse-

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30. *See, e.g.,* Iowa Elec. Light & Power Co. v. Atlas Corp., 467 F. Supp. 129, 137 (N.D. Iowa 1978), *rev'd on other grounds,* 603 F.2d 1301 (8th Cir. 1979), *cert. denied,* 445 U.S. 911 (1980).

31. *See, e.g.,* Feinman, *Critical Approaches to Contract Law,* 30 UCLA L. REV. 829 (1983); Kennedy, *Form and Substance in Private Law Adjudication,* 89 HARV. L. REV. 1685 (1976).

32. Even those who question the validity of the economists' assumption that rational persons are necessarily self-interested suggest that the assumption holds true in matters of trade and commerce. *See* Sen, *Rational Fools: A Critique of the Behavioral Foundations of Economic Theory,* 6 PHIL. & PUB. AFF. 317, 318 (1977).

33. *See* R. LUCE & H. RAIFFA, GAMES AND DECISIONS 276 (1957).

34. Whether the probabilities that the actor assigns have any factual or evidentiary basis is irrelevant. What is important is that the actor uses some probabilistic analysis, however subjective, to make its choice. *See* M. BACHARACH, ECONOMICS AND THE THEORY OF GAMES 14 (1977). Thus, an actor's knowledge of an event in the context of this Article is what an actor believes it knows rather than objective knowledge or an actual state of affairs. This may lead to egregious cases of bizarre behavior being deemed rational. *See* Berlin, *Rationality of Value Judgments,* in NOMOS VII: RATIONAL DECISION (C. Friedrich ed. 1964). This claim is made only for the commercial context.

35. Professor E. Allen Farnsworth invoked the psychological concept of

quences or to apply probabilities to those that are identified. For example, a commercial actor may know that the materialization of a certain event, such as an oil embargo, would be catastrophic for the contract but be unable to predict the event's probability. Alternatively, the actor may believe that there is a 0.1 probability of such an event during the contract term but be unsure of the loss that would result. Finally, the actor may identify an oil embargo as a potentially disruptive event but be unable to assign either a probability or a value to its occurrence. In each of these cases, the actor must decide how to draft the contract under a condition of *uncertainty*.[36]

No sharp dividing lines separate the risk, certainty, and uncertainty conditions. For example, both risk and certainty allow a decision maker to assign definite probabilities, ranging from zero to one hundred percent, to a specific consequence. Although action under a condition of risk requires the decision maker to guess about the future, the assignment of a probability allows for an educated guess, based on an event's expected value and discounted by the decision maker's risk aversion or risk preference, that approximates conditions of certainty.[37] Thus, the actor operating under a condition of risk has as much information relevant to its decision as an actor under a condition of certainty. An extension of this reasoning could create only the two categories of uncertainty and certainty and subsume risk in the latter.

"limited attention" to suggest that commercial actors will not consider all possible consequences of their conduct, not even all foreseeable consequences. Instead, actors will select a few "significant situations" and create expectations about the entire scope of possible consequences from those examples. *See* Farnsworth, *supra* note 13, at 868-70. For Farnsworth, this selection process, in which omissions from the contract are inevitable, broadens the realm of unconsented-to risks and therefore increases the area in which courts may intervene with "principles of fairness or justice" to adjust the relationship between parties. *Id.* at 891; *see infra* text accompanying notes 57-58.

36. Important works on decisions made under various conditions of the knowledge of consequences include R. LUCE & H. RAIFFA, *supra* note 33, at 13, and F. KNIGHT, RISK, UNCERTAINTY AND PROFIT (1921). *See infra* text accompanying notes 176-77; *see also* M. BACHARACH, *supra* note 34, at 14-15; J. MARCH & H. SIMON, ORGANIZATIONS 136 (1958); Lipton, *Contract and Uncertainty: The Reformation of an International Business Agreement*, 1 CARDOZO L. REV. 449 (1979).

37. For instance, a risk-neutral decision maker who knows that a course of action has a 50% chance of producing a $100 return is in as good a position to determine whether to take that course of action as a decision maker who is 100% certain that the course of action would produce a $100 return. Of course, this does not mean both decision makers would choose the same course of action.

Alternatively, one could equate risk with uncertainty because both require dealing with unknowns and thus require guessing about the consequences of present action. In addition, some commentators suggest that actors who pursue a course of conduct with uncertain consequences have implicitly assigned a probability to each potential consequence. The actors' revealed preferences thus transform the situation into one of risk.[38] This reasoning could also create only the two categories of uncertainty and certainty but subsume risk in the former.

For present purposes, however, it is helpful to retain certainty, risk, and uncertainty as separate categories. The conditions of ignorance that describe uncertainty are similar to those that adjustment advocates use to define whether an event is sufficiently unforeseeable to warrant excuse from performance. The limits placed on adjustment by those commentators, however, recognize that some risks are not subject to judicial reallocation. If examination of these separate categories suggests that the dividing line between risk and uncertainty is less meaningful than the adjustment arguments assume, then separate legal treatment of decisions made under these conditions may be unwarranted.

C. NEGOTIATING UNDER RISK AND UNCERTAINTY

As a decision maker attempts to increase its knowledge and move from a condition of uncertainty to a condition of risk or certainty, the costs of decision making increase. As the decision maker gains experience, it needs to expend less effort to reduce uncertainty or to make assessments of risk that it believes reflect actual probabilities and values.[39] To the extent that risk or uncertainty remains, however, such a condition imposes significant costs on the contracting process. Each actor will be unsure whether future events may lead it to regret having tied itself to a specific price term from a specific source of

38. For instance, one author suggests that an insurer who charges a $2,500 premium to insure against a $1,000,000 reward for the capture of the Loch Ness monster may be inferred to believe that there is less than a .0025 probability that the monster will be caught. *See* Lopes, *Some Thoughts on the Psychological Concept of Risk*, 9 J. EXPERIMENTAL PSYCHOLOGY: HUMAN PERCEPTION & PERFORMANCE 137, 138-43 (1983). For a review of the literature, see *id.*; Ellsberg, *Risk, Ambiguity and the Savage Axioms*, 75 Q.J. ECON. 643 (1961).

39. At the same time, on the assumption that easily uncovered data will be discovered first, the further an actor moves along the spectrum from uncertainty to certainty, the more effort will be necessary to make a marginal advance.

supply or a specific market. At the negotiation stage, therefore, each party will want to minimize risks that it can identify and allocate the costs of unidentifiable risks to minimize its exposure.[40] Generally, the degree of uncertainty, and thus the cost associated with avoiding subsequent regret, increases with the length of the contract term, because longer periods provide more opportunity for unexpected events.

With respect to disruptive events that are expressly identified, the parties may negotiate over who ought to bear the risk and what price the other party ought to pay in exchange. For an identified, negotiated risk, no reason exists for the law to impose a subsequent adjustment should the risk actually materialize. The party to whom the recognized risk was allocated by negotiation presumably believed itself in a superior position to avoid the risk or to insure against its materialization. That party either obtained or had the opportunity to obtain compensation for taking the risk through ex ante adjustment of the contract price.[41] When the risk materializes, therefore, even those who advocate adjustment in other circumstances reject pleas for court-imposed modification.[42]

40. Minimizing exposure does not necessarily mean allocating the risk to the other party. An actor who is in a superior position to bear a risk would presumably prefer to be paid to bear it rather than to pay the other party the greater sum necessary to induce that party to bear the risk.

41. *See* R. POSNER, THE ECONOMICS OF JUSTICE 93-95 (1982); Goetz & Scott, *Enforcing Promises: An Examination of the Basis of Contract*, 89 YALE L.J. 1261, 1285 (1980). Whether ex ante compensation constitutes consent to an activity has been the subject of some debate. *See* Coleman, *Efficiency, Utility, and Wealth Maximization*, 8 HOFSTRA L. REV. 509, 534-39 (1980); Dworkin, *Why Efficiency?*, 8 HOFSTRA L. REV. 563, 574-79 (1980); Posner, *The Ethical and Political Basis of the Efficiency Norm in Common Law Adjudication*, 8 HOFSTRA L. REV. 487, 491-97 (1980). That debate has centered on the question of whether the ex ante receipt of compensation for taking a risk constitutes consent to the materialization of that risk. The claim here is weaker; it is that the receipt of ex ante compensation for taking a risk precludes the recipient from complaining against the party who paid the compensation should the risk materialize. The difference in the two positions is evident from elaboration of an example given by Professor Jules Coleman. Coleman asserts that if a potential home buyer purchases a home in a high-crime district for a low price rather than a home in a low-crime district for a high price (and assuming that price is correlated with crime level), it would be implausible to contend that the buyer had consented to being burglarized. Coleman, *supra*, at 536-37, n.45. Although that may be true, the weaker position would plausibly contend that the buyer, having bargained for the risk, would have no complaint against the seller with whom the buyer bargained if a burglary occurred.

42. Hillman, *An Analysis of the Cessation of Contractual Relations*, 68 CORNELL L. REV. 617, 620 (1983); Speidel, *Supply Contracts*, *supra* note 10, at

1. The Argument for Adjustment

The argument for adjustment, therefore, concerns those events that have not been the subject of negotiation. In this context, the argument for adjustment has, at first glance, substantial appeal. For those who favor adjustment, the allocational bargain that creates responsibility also limits it; because contractual liability is predicated on consent to take certain risks, unanticipated risks not the subject of bargaining fall outside the area of consent.[43] Thus, no obligation to accept those risks flows from the promises that the parties have made to one another. When the unforeseen risk materializes, the world has changed from the one anticipated by the parties during negotiation. The resulting loss must be borne by someone; the deal originally contemplated has gone awry. Since it would be unfair to visit the unforeseen adverse consequences on a single party who did not consent to take the risk, either the contract should be dissolved or some compromise or adjustment should be imposed. The principles that may guide adjustment vary. For some commentators, the contract should be adjusted according to principles derived from deontological concepts of what the advantaged and the disadvantaged parties "deserve."[44] For others, the principles of adjustment may be inferred from analysis of the relationship the parties created when they entered the contract.[45] In any case, because the parties never reached any ex ante bargain with respect to this particular risk, failure to impose damages for nonperformance or to order specific performance does no disservice to contractual integrity. The intervening event simply brings about a state of affairs different from the one with respect to which the contract was made.

There are, of course, limits to the circumstances that trigger the duty to adjust; no commentator advocates adjustment

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405-06 (adjustment limited to situations when there is a "gap" in the bargain) (courts enforce express risk allocations).

Excuse under U.C.C. § 2-615 is also limited to risks for which a party has not "assumed a greater obligation." Alternatively, identification of and negotiation concerning a risk indicates that the intervening act is not one "the nonoccurrence of which was a basic assumption on which the contract was made." U.C.C. § 2-615(a).

43. Justice Holmes captured this notion in his argument against liability for non-negligent accidents that cause unanticipated injuries: "A choice which entails a concealed consequence is as to that consequence no choice." O.W. HOLMES, THE COMMON LAW 76 (M. Howe ed. 1963).

44. *See infra* notes 178-206 and accompanying text.

45. *See infra* note 102 and accompanying text.

whenever circumstances change. A separation of situations in which commercial actors can rationally take risks from those in which they cannot underlies all adjustment arguments. Advocates of adjustment implicitly suggest that binding a party to a risk is appropriate only if some minimal level of information concerning that risk is available to the parties at the negotiation stage. Below that minimum, usually defined by reference to what is anticipated or foreseeable, actors are deemed to have speculated about the future under conditions so uncertain that they render the subsequent allocation unfair or undesirable.

2. Contractual Silence as Allocation of Risk

Although the adjustment argument is appealing, closer examination indicates that it suffers from serious shortcomings. Given that the parties ought to be held to their bargains with respect to expressly allocated risks,[46] it does not follow that a contract's failure to include a clause expressly addressing an event that subsequently occurs means that that risk was not identified or allocated. Risks may be allocated by an implicit process, inferred from circumstances and usage of trade.[47] Advocates of adjustment would agree that risks may be implicitly allocated[48] and would likely extend their view of "voluntary exchange" to such allocations. Even where no trade usage dominates, however, the parties' silence about the risk that ultimately materializes requires that an allocation of risk be imputed. For instance, the absence of an explicit allocation or allocation through trade usage may imply an intent of the parties that the disadvantaged party be excused from *all* performance under the contract on the occurrence of a section 2-615 event.[49] Thus, the promisee, who would then receive no benefit

46. *See* U.C.C. § 2-615.

47. *See* § 2-615 comment 8; *see also* Columbia Nitrogen Corp. v. Royster Co., 451 F.2d 3 (4th Cir. 1971) (custom of adjustment in trade); Robberson Steel, Inc. v. J.D. Abrams, Inc., 582 S.W.2d 558, 564 (Tex. Civ. App. 1979) (foreseeable risk implicitly allocated through custom).

48. *See, e.g.*, Comment, *supra* note 10, at 988-89.

49. The drafters provided that an excused seller must fulfill its contract to the extent that the supervening contingency permits. *See* U.C.C. § 2-615 comment 11. That may require partial performance in some cases, for example, where the supervening event is the closing of the sole source of the goods after the seller has obtained part of the buyer's order. *See* U.C.C. § 2-615(b). But where the supervening event applies to all goods, as in the case of crop failure, war, or embargo, performance is likely to be *totally* excused, if it is excused at all. *See* U.C.C. § 2-615(a) & comment 4 ("Delay in delivery or non-delivery *in whole* or in part") (emphasis added).

from the bargain, implicitly bears the risk of the intervening event.[50] Labelling a risk as "unforeseeable" or "unanticipated," therefore, does not compel a conclusion that the parties did not allocate the risk; rather, it indicates how the risk was allocated.

Viewing the allocational bargain as an attempt by parties to reduce the existence and consequences of risk and uncertainty,[51] it follows that the parties will sometimes attempt to attain that result by implicit allocations or by acceptance of state-imposed allocations. The self-interested actor will use the allocation technique that permits optimum avoidance of the *net costs* associated with risk and uncertainty, not necessarily maximum avoidance of risk or uncertainty itself. The actor will seek to eliminate only that degree of unpredictability that can be reduced at a cost perceived to be *less* than the expected cost[52] of the risk itself; to invest *more* would be contrary to the assumption of self-interest.

The cost of reducing risk and uncertainty is a function of the cost of identifying potentially disruptive events and the cost of either ex ante negotiation about risk allocation or ex post negotiation and litigation about contract modification. Ex ante identification of risks requires the actor to expend resources to determine historical patterns of how similar contracts have been derailed and to predict future disruptions. Similarly, negotiation concerning identified risks requires investment of resources to determine which party is in a superior position to assume the risk and what concessions will be made to induce that party to take advantage of its position.[53] In addition, a contractual provision concerning the risk may be the subject of an enforcement action if the risk materializes and the party to whom the risk is allocated fails to perform. The enforcement action obviously will also impose costs on the actors. At some point, therefore, the anticipated costs of identifying risks, negotiating with respect to them, and enforcing the negotiated con-

50. *See* C. FRIED, CONTRACT AS PROMISE 64-65 (1981).

51. *See supra* notes 28-32 and accompanying text.

52. The expected loss or expected cost would be a function of the actual loss or cost borne by the actor should the risk materialize discounted by the probability that it will materialize. In any case, the determination to bargain explicitly about risks will also depend on the actor's level of risk preference.

53. *See, e.g.*, Speidel, *Excusable Nonperformance in Sales Contracts: Some Thoughts about Risk Management*, 32 S.C.L. REV. 241, 251-54 (1980) (enumerating factors relevant to determining which party is the superior bearer of a particular risk, e.g., knowledge and experience in the area the contract concerns, availability of alternative insurance mechanisms, relative ability to acquire information).

tractual provision may exceed either the expected loss of a risk's materialization or the expected cost of negotiating a modification or allowing a court to allocate the risk after the disruptive event occurs. If that point is reached, even a commercial actor with perfect information would not seek to include a contract provision concerning that particular risk.[54]

This nonadjustment model suggests that commercial actors may exclude a risk from their completed contract not because the risk was beyond their contemplation but because they considered it and decided that inclusion was not worth the commensurate cost.[55] In short, exclusion of a certain risk may be a

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54. Farnsworth thus concludes that the written contract agreed to by the parties must survive two selection processes: first, the process in which parties identify the events that the contract will cover; second, the process in which the parties decide which of the identified events are suitable for inclusion in the contract. *See* Farnsworth, *supra* note 13, at 868-71.

Professor Steven Shavell makes the point with respect to the issue of using damage measures as a substitute for complete contracts:

> Suppose that t_1 is the cost of including in the contract a Pareto efficient provision for a contingency that will occur with probability p, that e is the cost of enforcing the provision if the contingency occurs, that $t_2 > e$ is the cost of dispute resolution if there is no contract provision for the contingency and it occurs, and that b is the cost attributable to deviation from Pareto efficiency under the system for dispute resolution. Then there will be no provision for the contingency included in the contract if the expected cost of making a provision, $t_1 + pe$, exceeds the expected costs of not doing so, $p(t_2 + b)$, or, equivalently, if $t_1 > p(t_2 + b - e)$. *Hence, a low probability of occurrence . . . militates against including a provision for the contingency in the contract.*

Shavell, *Damage Measures for Breach of Contract*, 11 BELL J. ECON. 466, 468 n.7 (1980) (emphasis in original).

55. Professor Farnsworth refers to this phenomenon as "understatement of expression," which may be generated by fear of delaying or losing the deal over issues of language rather than by inattention to the risk. *See* Farnsworth, *supra* note 13, at 886. One of the clearest cases of this phenomenon occurred during negotiations for a contract that resulted in litigation after the closing of the Suez Canal in 1956. Lord Denning's recitation of the facts is worth quoting at length:

> It was obvious to all mercantile men that English and French forces might be sent to seize the canal, and that this might lead to it becoming impassable to traffic. It was in this atmosphere that negotiations took place for the chartering of the vessel *Eugenia*. She flew the Liberian flag. The proposal was to charter her to a Russian state trading corporation called V/O Sovfracht. The Russians wanted her to carry iron and steel from the Black Sea to India. The negotiations took place in London between the agents of the parties from August 29 to September 9, 1956. The agents of both sides realised that there was a risk that the Suez Canal might be closed, and each agent suggested terms to meet the possibility. But they came to no agreement. And in the end they concluded the bargain on the terms of the Baltime Charter without any express clause to deal with the matter.

voluntary choice by a rational actor. Consequently, if one of the excluded contingencies arises, the party on whom the loss initially falls cannot complain, provided its estimates of the probability of occurrence and the cost of dispute resolution are accurate. Similarly, if it underestimated the probability of the occurrence or the cost of dispute resolution, its ex ante calculations were no less purposive and do not by themselves justify a rule that requires sharing of the loss.[56]

Professor Richard E. Speidel also acknowledges that the written agreement of the parties will be incomplete. To him, these "failures of agreement in the process of voluntary exchange" are twofold: the failure to identify and allocate explicitly the risk of a change in circumstances and the failure to reach an agreed modification to fill the gap, created by the first failure, after the risk materializes.[57] These seem equivalent to the absence of identification and ex ante or ex post negotiation about an identified risk discussed above. For Professor Speidel, however, the consequences of the absence of explicit risk allocation when unidentified events are also "unanticipated" are dramatically different. In his view, the failures represent true gaps in the bargaining process that trigger judicial intervention, either by imposing on the parties the bargain they likely would have arrived at had they expressly considered and allocated the loss or, in Professor Speidel's more dramatic suggestion, by imposing a compromise price adjustment on the parties in some

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> That meant that, if the canal were to be closed, they would "leave it to the lawyers to sort out."

Ocean Tramp Tankers Corp. v. V/O Sovfracht (The Eugenia), 2 Q.B. 226, 233-34 (1964). The parties may also have intended implicitly to allocate risks by providing for a specific type of charter which, as a matter of custom, placed risk on one party rather than another. *See generally* Schlegel, *supra* note 27, at 436 (explaining difference between time charterparty and voyage charterparty in allocating losses due to frustration).

56. Indeed, an argument from autonomy could contend that state interference with mistaken judgment prevents the development of "moral muscle," which requires the unencumbered exercise of personal judgment, notwithstanding that individuals may come to regret their decisions. *See* Feinberg, *Autonomy, Sovereignty, and Privacy: Moral Ideas in the Constitution?*, 58 NOTRE DAME LAW. 445, 457-58 & n.16 (1983). The "moral muscle" argument assumes that there will be subsequent opportunities to apply what has been learned from previous mistakes. Thus, it is more difficult to apply this particular antipaternalism rationale to singular decisions or to decisions that are likely to have consequences that impede future opportunities for decision making, such as a decision to have a lobotomy. For the application of these constraints to the long-term supply contract, see *infra* text accompanying notes 68-87.

57. Speidel, *Supply Contracts*, *supra* note 10, at 382.

cases.[58]

Viewed in this way, however, Speidel's inquiry may be off to a false start. If the exchange is, as Speidel assumes, a voluntary one between rational actors, then any "failure" to include specific terms or to consider a specific risk may itself be a voluntary part of the agreement. What the parties have agreed to, in effect, is to consider only certain risks and no others. The failure to allocate a risk in a voluntary bargain does not necessarily constitute a failure of agreement or of the bargaining process; it may constitute a decision by the party who will suffer from the risk's materialization that the expected loss from the risk is not worth the resources that would have to be invested to identify it and allocate it expressly.

An example may help here. Assume that Paper Supplier and Printer are negotiating a contract for all of Printer's paper requirements over the next twenty years. Supplier will want to consider a variety of risks that may materialize over the course of the proposed contract term and include appropriate provisions for some of them. Various events could affect the value of the contract. Extended strikes at paper mills could reduce the supply of paper and drive up costs. Advanced technology in word processing could reduce errors in printed work and reduce Printer's demand for paper. An insect infestation could destroy millions of acres of timberland. The states of Washington and Oregon could secede from the Union and place a lumber embargo on shipments to the remaining states. Not all of these risks will be provided for in the contract, even if Supplier thinks of each of them. Supplier will discount the loss that it would suffer if it were to bear a specific risk and the event were to materialize by the probability that the event will occur. It is unlikely further to analyze the risk, bargain about its proper allocation, or draft a provision covering it if the costs of that process exceed the expected loss from the risk. Thus, the absence of the allocation in the contract does not necessarily indicate a failure to agree in the sense that the parties were unaware of a risk or acted contrary to their desires. It may merely describe a situation in which a party potentially harmed by a subsequent event chose not to make the investment necessary

58. Speidel defines the "operative situation" in which court ordered adjustment is appropriate as arising "when unanticipated change causes substantial unbargained for gains and losses in the performance of a long-term contract for the supply or processing of goods." *Id.* at 395.

to allocate the risk elsewhere.[59]

Still, Supplier's silence cannot be without consequences. If the law excuses Supplier's performance when a disruptive event materializes, it determines that silence about the issue was intended to place on Printer the risk that the contract would end under such circumstances. If the law adjusts the obligations of both parties, it reads the silence as showing that neither intended fully to bear the loss in such a case. If the law fails to adjust the contract in any manner, it interprets the silence as the assumption of the risk by Supplier.

In choosing among these alternatives, little purpose is served by saying that the parties failed to consider this risk if what is meant is that the party on whom the loss initially falls *determined* not to think about it. Indeed, Supplier's contractual silence may then require it to bear the loss. If, with more effort, Supplier could have identified and bargained about the risk but determined that additional effort would not be cost-effective, Supplier's subsequent assertion that it should be excused because its attention was not directed to the risk seems hollow. Because risk bearing is costly, had the parties bargained explicitly about the risk at Supplier's insistence and had Printer accepted the risk, Printer would have received compensation to reflect that risk bearing. Thus, any subsequent imposition of that risk on Printer through a duty to adjust the contract unjustly rewards Supplier and penalizes Printer. Although it is theoretically conceivable that Supplier could compensate Printer for the adjustment, it is unlikely that the parties, assisted by the court, could replicate with hindsight the bargain they would have struck at the negotiation stage.[60]

Indeed, the inference from contractual silence that the parties were ignorant of the disruptive event's possibility may disserve the negotiation process, at least if that process is predicated on pursuit of self-interest. For instance, Supplier alone might fail to identify a risk, the materialization of which would place it at a disadvantage. Printer may identify the risk but consider that, from its perspective, materialization of the event threatens no harm and could make the contract more profitable. In addition, Printer may recognize that bringing the

59. *See* Goetz & Scott, *supra* note 41, at 1279-80.

60. Both courts and the parties will have difficulty with any attempt accurately to reconstruct their ex ante preferences after a disruptive event has occurred. This difficulty has led at least one author to disfavor loss splitting in impossibility cases. *See* Schwartz, *Sales Law and Inflations*, 50 S. CAL. L. REV. 1, 8 n.20 (1976).

risk to Supplier's attention will require additional negotiation costs and require Printer to compensate Supplier if the latter is to bear the risk. Absent any duty to disclose,[61] Printer is unlikely to bring the risk to Supplier's attention. As a result, the risk will not be allocated expressly, even though one of the parties has identified it and considers it an appropriate subject for negotiation. In this situation, a gap exists in the contract just as if neither party had identified the risk. Nevertheless, given the general absence of a duty to disclose, only a will theory of contract, requiring meeting of the minds on all contract terms, would support the conclusion that the gap emanates from a failure to reach agreement that warrants modification to save Supplier from its own folly.

D. Rational Action Under Uncertainty

1. "True Uncertainty"

At this point, adjustment advocates might object that the analysis makes some assumptions that are unwarranted in the case of true uncertainty, to which adjustment arguments are primarily directed. The advocates would assert that the nonadjustment model is an argument about rational actors who have sufficient knowledge to seek optimal solutions.[62] Such actors are capable of identifying goals and objectives, of recognizing alternative mechanisms for achieving those goals and objectives, of projecting the various consequences that flow from choosing a particular alternative, and of selecting the alternative that produces the greatest net personal gain. Even an

61. As a general rule, there is no duty to disclose information in a commercial bargain transaction. *See* J. CALAMARI & J. PERILLO, CONTRACTS 288 (2d ed. 1977). For a discussion of the proper scope of a duty to disclose, see Kronman, *Mistake, Disclosure, Information and the Law of Contracts,* 7 J. LEG. STUD. 1 (1978). *But see* Oloffson v. Coomer, 11 Ill. App. 3d 918, 296 N.E.2d 871 (1973) (violation of good faith obligation not to disclose trade custom); *cf.* A. FARNSWORTH, CONTRACTS § 4.11, at 238-40 (1982) (erosion of general rule). The Restatement (Second) of Contracts extends a duty to disclose to situations in which disclosure would correct a mistake of the other party as to a "basic assumption" on which that party relied in making the contract. *See* RESTATEMENT (SECOND) OF CONTRACTS § 161(b) (1981).

62. *See, e.g.,* G. ALLISON, ESSENCE OF DECISION: EXPLAINING THE CUBAN MISSILE CRISIS 10-38 (1971) (giving a general overview of the features of a rational actor as that actor appears in academic political science literature, and explaining the methodology by which a model of a rational actor is constructed); Alchian, *Uncertainty, Evolution, and Economic Theory,* 58 J. POL. ECON. 211, 211-12 (1950) (analogizing the economic system to biological evolution in order to explain how choices may be rational even under circumstances in which foresight is not possible).

actor with imperfect knowledge can rationally make choices under the assigned probabilities associated with a situation of risk. A party who is in an inferior position to prevent a loss or to insure against it may bargain to shift that loss to the other party who, recognizing its superior position, will gladly accept it for a fee that precisely reflects its increased risk.[63]

Unfortunately, the adjustment advocates continue, the world is not always so lovely. In the case of true uncertainty, an actor may be unable to identify, quantify, and select among risks not out of idiosyncratic ignorance but because the calculations necessary to the choice are beyond human capacity, the evidence of the potential disruptive event has not been discovered, or that evidence is prohibitively expensive to unearth.[64] The seeds of Oregon's secession fifteen years hence may not yet have been sown. How are rational actors to identify the risk? What probability of materialization are they to assign to it? Can any choice they make about the future be said to have been made with this event in mind? Omissions from the written contract that result from such uncertainty are not, according to the objection, generated by the kinds of calculations or problem-solving techniques that could be termed "rational."[65]

Proponents of adjustment apparently assume that actions taken under uncertainty are sufficiently irrational to justify judicial intervention because the parties neither have nor could have struck a bargain worthy of protection.[66] Moreover, proponents of adjustment imply that there is no reason, from the societal perspective, not to reconstruct the parties' bargain under these conditions. Although any reallocation affects the wealth distribution between the parties, if the parties could not foresee the risk, then neither could have avoided or insured against it, so no particular allocation has efficiency implications.[67]

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63. *See* Posner & Rosenfield, *Impossibility and Related Doctrines in Contract Law: An Economic Analysis,* 6 J. LEGAL STUD. 83 (1977).

64. *See* Speidel, *Supply Contracts, supra* note 10, at 398.

65. The omission carries the same consequences whether the uncertainty results from limited historical evidence concerning the intervening event at the time of negotiation, from what the courts may consider unforeseeable events, or from the limited ability of the actors to digest and assign probabilities to events that are foreseeable. *See supra* note 35 and accompanying text.

66. *See* Farnsworth, *supra* note 13, at 881-91.

67. *See* Bishop, *The Contract-Tort Boundary and the Economics of Insurance,* 12 J. LEGAL STUD. 241, 249 (1983).

2. Bargaining Under Bounded Rationality

This analysis, however, begs the essential question of what a rational, self-interested actor would do when confronted with uncertainty. It assumes that parties in such a position can do little better than to throw up their hands in despair and place themselves at the mercy of future events and the willingness of courts to rescue them from the adverse consequences of those events. "Rational" action is thus limited to those situations in which actors confront solely conditions of risk or certainty.

Developments in decision theory and organization theory support the descriptive distinctions between decision making under risk and under uncertainty.[68] They do not, however, necessarily support the conclusion that decisions reached under uncertainty are less worthy of legal enforcement. This body of work rejects as inconsistent with human experience and ability the conditions of omniscient "comprehensive rationality" assumed in classical economic models.[69] Instead, the theories recognize that the limitations of the human mind require that actors make decisions under conditions of ignorance or, more neutrally, "bounded rationality."[70] The inability to make decisions with complete information or with all the information necessary to weigh probabilities, however, does not render human problem solving irrational or unworthy of protection; instead it requires the decision maker to organize decision-making processes and develop simplified models that sensibly adjust the costs of gathering and computing relevant information. Use of such models permits both the effective utilization of available information and the most advantageous development of currently unavailable information. The combined effect is to reduce uncertainty or control its consequences and thereby to enable the decision to be made under conditions as close to certainty as possible.[71]

A decision maker may choose among several of these sim-

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68. *See, e.g.,* R. LUCE & H. RAIFFA, *supra* note 33, at 13. Some more recent theorists tend to classify decisions as made under certainty or under uncertainty. *See, e.g.,* R. WINKLER, INTRODUCTION TO BAYESIAN INFERENCE AND DECISION 220 (1972).

69. *See* H. SIMON, MODELS OF MAN 3 (1957) (classical economic models require "powers of prescience and capacities for computation resembling those we usually attribute to God.").

70. *See, e.g.,* March, *Bounded Rationality, Ambiguity and the Engineering of Choice,* 9 BELL J. ECON. 587 (1978).

71. H. SIMON, ADMINISTRATIVE BEHAVIOR 80-84, 241 (3d ed. 1976); Simon, *A Behavioral Model of Rational Choice,* 69 Q.J. ECON. 99 (1955).

plified models. One such strategy is "satisficing," in which decision makers deal with the effects of costly information by seeking a "satisfactory" solution rather than an optimal one.[72] Other strategies include making rough guesses of probabilities and refining those guesses in future circumstances based on historical experience; eliminating all but a small number of factors from any consideration, even though the omitted factors may ultimately determine the value of the outcome;[73] or examining alternatives sequentially until the first satisfactory alternative is found, even though additional examination might reveal a more satisfactory alternative.[74] Given such strategies, a commercial actor may well make a decision that cannot—given the limits of the human organism—be improved on in the absence of additional relevant information. If made consistent with the abilities and information that the decision maker possesses, however, a decision made under these circumstances is not irrational.

Choices made under such circumstances may be heavily subjective, depending largely on the preferences and desires of the individuals making them.[75] If the decision maker's desires and preferences are reasonable in light of the information at hand, even if that information does not fully represent the actual situation, acts predicated on those beliefs and desires appear to be rational.[76] This is not to say commercial actors necessarily predict the future through the use of rigorous Bayesian calculations. This does suggest, however, that commercial actors are capable of bargaining in a manner consistent with their beliefs about future states of the world and that those beliefs may, in turn, be predicated on credible preferences and desires.

Put more strongly, the availability of certain rigorous formulae for making decisions suggests actors *could* have invested in such enterprises. Actors may instead invest in strategies such as satisficing, even though those strategies may systematically discount low probability events and thus fail to produce

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72. H. SIMON, *supra* note 71, at xxix.

73. *Id.* at xxix-xxx.

74. *See, e.g., id.* at xxx-xxxi; J. MARCH & H. SIMON, *supra* note 36, at 137-41; Diver, *A Theory of Regulatory Enforcement*, 28 PUB. POL'Y 257, 271-79 (1980).

75. These preferences and desires may be tempered or exacerbated when, as is likely in most commercial contexts, the decision is made by several individuals on behalf of a firm.

76. E. EELLS, RATIONAL DECISION AND CAUSALITY 5, 151 (1982).

optimal results. Should a low probability event then occur, the actor may regret not having taken more complete steps towards resolving uncertainty. Unless the failure can be explained as something other than a purposive act, informed by anterior speculation on the most highly valued course of action, the justification for a legal claim for an adjustment obligation imposed on the other party is unclear. Although at first glance this assertion sounds as though it places on the actor the obligation, at its peril, to determine all possible future states of affairs, examination of the available strategies demonstrates that the assertion requires no such harsh result. The full range of possible strategies will be explored momentarily. To get a flavor of the options available, however, a strategy might be adopted in which the actor minimizes its exposure[77] by bargaining for an adjustment clause in the contract[78] rather than simply accepting the risk of unidentified losses.

Thus, although Supplier may be unable to identify or assign probabilities to all potential risks that threaten its satisfaction with the bargain it strikes, it is capable of simplifying its choices, eliminating some risks from consideration as inherently improbable, and routinizing others consistent with experience and guesswork. It may focus on general consequences that could endanger the value of the contract—shortages, surpluses, changes in related industries—rather than on more specific events that could generate these consequences, such as Washington's and Oregon's secessions from the Union. Armed with this information about the general consequences, Supplier could determine possible courses of action, conditions that might arise, and consequences that might flow from the coincidence of acts and conditions. Supplier could then decide which consequences are worth contracting to obtain or avoid.

Even if decision making under uncertainty cannot be expected to produce optimal results, there are presumably superior and inferior modes of satisficing, reducing alternatives, and estimating probabilities. Selected strategies may bring the actual decision closer to one made under conditions of comprehensive rationality than others.[79] If an actor can, under conditions of uncertainty, make decisions that approximate to different degrees decisions made under conditions of certainty,

77. *See* R. LUCE & H. RAIFFA, *supra* note 33, at 280-82.

78. *See infra* text accompanying notes 151-52.

79. *See* Lindblom, *Some Limitations on Rationality: A Comment*, in NOMOS VII: RATIONAL DECISION 224, 227-28 (C. Friedrich ed. 1964).

its use of that capacity to reach that result presumably would be preferable, at least to the extent that it could efficiently reduce costs associated with uncertainty.[80] A legal regime that, in the absence of contrary allocations by the parties, leaves losses that result from uncertainty where they fall would induce a party to use the optimal decision-making process available in light of the costs of that process. Failure to impose the consequences of its rational behavior on a decision maker reduces its incentive to use its capacity for rational decision making. In addition, if an actor does not bear the loss, it will have an insufficient incentive to take the same kind of event into account the next time it enters into a similar transaction. Although the actor may fear that the event will thereafter be considered foreseeable and thus negotiable under conditions of risk, if the actor uses past costs alone as a guide to what must be guarded against in the future, it will fail to consider the disruptive event as one against which it must protect itself.[81]

On the other hand, requiring decision makers to bear the consequences of their decisions is not likely to yield optimal results in every case, or even in any case. Instead, the result is likely, to the extent possible, to draw on past experiences and present capabilities to allocate losses. In this process, risks are likely to be grouped together and defined in terms of consequences rather than specific causes.

What the nonadjustment model suggests, therefore, is that participation in a long-term contract triggers a situation of strict liability. As with strict liability in tort, which implies no fault or blameworthiness of the party who causes the loss, the nonadjustment model implies no miscalculation by the party on whom the loss falls. Indeed, the failure to allocate all or part of the loss to another or even to take additional steps to recognize the possibility of loss may be perfectly reasonable. Just as strict liability induces the liable party to make an appropriate analysis of whether the social benefits of its conduct exceed the social costs by requiring it to internalize both,[82] so nonadjustment induces use of the best available process of decision making under uncertainty. The sole caveat for both is that the conditions permit some form of analysis of the benefits and costs associated with the underlying activity that may be de-

80. *See* Patterson, *The Apportionment of Business Risks Through Legal Devices*, 24 COLUM. L. REV. 335, 344-45 (1924).

81. *See* Bishop, *supra* note 67, at 249.

82. *See* G. CALABRESI, THE COSTS OF ACCIDENTS 73-75, 135-40 (1970).

scribed as a "rational" analysis.[83]

E. THE LIMITS OF RATIONAL NEGOTIATION

Proponents of adjustment often charge that leaving unallocated losses where they lie imposes harsh consequences on a party that could do no better.[84] The preceding description of the decision-making process under uncertainty suggests that decision makers can improve their efforts and that commercial transactions will benefit if decision makers are induced to think about risk allocation of low probability events. This instrumentalist view, however, cannot hide the harsh results when an event of remote probability, not the subject of bargaining, actually materializes. At best, it can justify those results. Consequently, if the instrumentalist goals that justify nonadjustment were incapable of being achieved, judicial intervention would be more appropriate to avoid such harshness. The following sections examine two situations that could theoretically frustrate the nonadjustment model's attempt to improve decision making and conclude that neither limitation applies to long-term supply contracts.

1. Non-Recurring Transactions

The nonadjustment model describes an incremental, trial-and-error process in which the actors have sufficient stake in the outcome that they will seek to discover remote risks and in which they will have future opportunities to apply the lessons

83. There is, of course, substantial debate concerning strict liability for unforeseeable events in tort. Professor Alan Schwartz has recently suggested that imposition of liability for risk that could not have been discovered with an optimal amount of research would fail to reduce accidents and would impose additional costs on the legal system without furthering any other goal appropriate to tort law. *See* A. Schwartz, Products Liability, Corporate Structure and Bankruptcy: Toxic Substances and the Remote Risk Relationship (forthcoming) (copy on file with the author). The New Jersey Supreme Court appeared to endorse liability for unforeseeable harms, *see* Beshada v. Johns-Manville Prod. Corp., 90 N.J. 191, 202-08, 447 A.2d 539, 545-49 (1982) (manufacturer of asbestos liable although it could not have known of danger), but has retreated from that position, *see* Feldman v. Lederle Laboratories, No. A-70 (N.J. July 30, 1984) (test is whether manufacturer should have known of danger); O'Brien v. Muskin Corp., 94 N.J. 169, 182-84, 463 A.2d 298, 305 (1983) (same). The case for judicially imposed adjustment of losses from unforeseeable events in tort is strengthened by the relative inability of tort victims to bargain before the fact about the allocation of unforeseeable risks.

84. *See, e.g.*, C. FRIED, *supra* note 50, at 64; Schwartz, *supra* note 60, at 6-8; Comment, *supra* note 10, at 1001.

learned from previous decisions.[85] For the model to be successful, the level to which actors bound by its conclusions will invest in the discovery and elimination of risks must be relatively high. Obviously, this process is appropriate primarily when the decision at issue is a recurring one or where the investment required by the decision is substantial. In those situations, there is justification for the implicit assumptions of the model that actors (1) invest in search and receive feedback concerning the sufficiency of protective measures they and others have taken to deal with remote risks, (2) process that information, and (3) apply the information to new transactions. If the form of transaction is not repeated, the lesson is learned too late to be of useful application; if the transaction does not require substantial investment, avoidance of remote risks will not justify substantial search costs. The long-term supply contract between commercial actors appears particularly suited to the analysis. Parties to these contracts engage in the same type of transaction on numerous occasions, extending over a significant period of time. They therefore expose themselves repeatedly to the risks of the transaction, giving them both the incentive to discover the existence and probability of risks and greater access to the information necessary to those discoveries. Repeated involvement in similar transactions increases each actor's chance of falling victim to a risk; continued participation in the activity decreases the marginal cost of discovering the risks that attend the activity. Even if a given actor does not directly confront a risk, that actor will probably be familiar with other contracts in the industry, particularly those that led to unfortunate results for one in its position, and it will learn from those situations.

The party to a "one-shot" transaction, the discrete entrant into the market who purchases goods, never to return, faces far greater marginal costs in defining or analyzing the risks or in meeting others who can assit in that effort. That these actors will help foster commercially "rational" decision making is doubtful. Even if the cost of a particular discrete transaction were sufficiently high to warrant investment in the discovery of information, the availability of information is questionable. A discrete entrant has little incentive to report its discoveries to other potential entrants, because it can expect little personal benefit and some cost to attach to its efforts.[86]

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85. *See supra* note 56.

86. Even if such discrete entrants into the market wish to report their experience to help others, they would be hard pressed to find a forum that

2. Irrational Actors

The second circumstance that would probably frustrate the model follows from the assumption that decisions made under bounded rationality bear some meaningful relationship to the circumstances that subsequently arise. Reactions to uncertainty are not expected to be optimal but are expected to produce reliable results. If such decisions are not simply suspect or unrefined but intuitively and inevitably so off the mark that they are misleading, then no valid reason exists, other than the value of a flat administrative rule, to enforce bargains made under such circumstances. No improvement in the risk allocation process will result. Thus, if commercial actors failed to consider certain risks not as part of a rational decision-making process subject to subsequent improvement and refinement but because the actors were psychologically incapable of confronting the existence of those risks, application of the model would be inappropriate.

Literature concerning reactions of individuals facing situations of risk and uncertainty indicates that such circumstances do exist. Individuals, wishing to think well of themselves and believing that it would be irrational to confront situations fraught with risk, may rationalize their willingness to enter into such situations through cognitive dissonance; that is, by denying that the risk exists, notwithstanding substantial evidence to the contrary.[87] If commercial actors will predictably create barriers that preclude meaningful recognition or evaluation of risks, the intervention of a more objective evaluator is appropriate to correct the inherently flawed decision-making process.[88]

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serves as an effective repository of such information. Consumers, therefore, are considered not to have developed effective information networks about product quality and merchants. *See* Leff, *Injury, Ignorance and Spite—The Dynamics of Coercive Collection,* 80 YALE L.J. 1, 31-32 (1970). Within a limited geographical area, consumer picketing of a particular merchant may fill the informational void. *Cf.* Harper, *The Consumer's Emerging Right to Boycott:* NAACP v. Claiborne Hardware *and Its Implications for American Law,* 93 YALE L.J. 409, 421-22 (1984) (arguing that consumer boycotts should be protected because they enable the individual to affect the economy).

87. *See* J. BREHM & A. COHEN, EXPLORATIONS IN COGNITIVE DISSONANCE 3-7, 232-44 (1962); Akerlof & Dickens, *The Economic Consequences of Cognitive Dissonance,* 72 AM. ECON. REV. 307 (1982).

88. Akerlof & Dickens, *supra* note 87, at 308. For instance, even those who argue that tort liability rules should be predicated on a determination of who is in a superior position to calculate the costs and benefits of a given course of conduct recognize that the inquiry must take into account the possiblity that an actor nominally occupying that position will be unable realistically

There is reason to believe, however, that cognitive dissonance does not pose a serious problem in the context of long-term commercial contracts. Rejection of a cognition of risk appears to be most probable where the actor has already invested significant resources in the enterprise that is now considered objectively to be risky.[89] In such circumstances, risk avoidance entails both the imposition of substantial financial costs on the actor, as it would require forgoing sunk costs, and the recognition that past actions were imprudent. Thus, defenders of job safety regulation argue that individuals are likely to deny the presence of risk on the job rather than relinquish the job, as might be required by a cost-benefit analysis once the risk is admitted.[90] Similarly, people residing in areas with a high risk of flood or earthquake damage may fail to purchase flood or earthquake insurance because that would admit the risk under which they live.[91]

The issues confronting the commercial actor are of a different order. Decisions that ignore or consider the risks of entering a contract are made during the negotiation stage of the contract, before substantial costs are invested in the enterprise. They are unlike the examples above, in which new risk-avoidance mechanisms both become available and are eschewed *after* the actor has selected a course of conduct. Thus, a commercial actor's recognition of the risk would not imply previous imprudence that could threaten the actor's self-image; indeed, deliberation about how a proposed course of action could produce adverse consequences in the distant future may signal prudent behavior.[92]

Moreover, where risks are recognized, they do not necessarily entail losses of tragic proportions. If a potential long-term contract were vital to the financial health of the actor, the risk of losing the deal might be claimed to be great enough to cause the actor to reject warning signs and therefore to fail to confront such risks when the deal is implemented. In the next

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to consider the risks. *See* Calabresi & Hirschoff, *Toward a Test for Strict Liability in Torts*, 81 YALE L.J. 1055, 1070-71 (1972); Gillette, Book Review, 60 B.U.L. REV. 383, 389-90 (1980).

89. *See* Akerlof & Dickens, *supra* note 87, at 308-10.

90. *See id.* at 310.

91. *See* H. KUNREUTHER, DISASTER INSURANCE PROTECTION: PUBLIC POLICY LESSONS 105-06 (1978). For a recent suggestion that the failure of group at risk to purchase earthquake insurance is perfectly rational, see Wall St. J., Aug. 14, 1984, at 33, col. 1.

92. *See* T. NAGEL, THE POSSIBILITY OF ALTRUISM 33-37 (1978).

section of this Article, however, several low-cost mechanisms that commercial actors can use to allocate the risk of remote but destructive events will be suggested.[93] If such mechanisms exist, then commercial actors do not face the "tragic choice" that appears to generate dissonance. The absence of a need to confront such a choice may underlie the conclusion of some researchers that "[i]n most economic transactions there is no gain to rationalizing and cognitive dissonance plays no role."[94]

An equally serious concern, however, emerges from the psychological literature sugesting that judgments made under uncertainty are affected by perceptual shortcuts, or heuristics, that systematically generate errors in decision making. This literature suggests that individuals misestimate the occurrence of low-probability events and may fail entirely to provide for future surprises in a manner endemic to human cognitive and analytical processes.[95] To some commentators, these constraints on the reliability of human prediction indicate the need for postagreement intervention or for an increased imposition of risk-sharing devices on contracting parties.[96] At the very least, this literature raises questions about the ability of actors to eliminate errors in prediction that are rooted in innate perceptual limitations.

Whether these limitations infect all classes of actors equally, however, is not entirely clear. Most of the application of this work to the law has concerned the ability of consumers to make reasoned choices based on limited information.[97] The laboratory experiments that provided the psychological data have involved subjects who have little interest in the outcome of their responses other than for the purposes of the immediate experiment. Their incentive to "get it right" is bordered by a relatively low horizon, such as a small reward or self-satisfaction.[98] Although these motivations may parallel those involved

93. *See infra* notes 139-54 and accompanying text.

94. Akerlof & Dickens, *supra* note 87, at 308.

95. For a collection of the underlying psychological literature, see D. KAHNEMAN, P. SLOVIC & A. TVERSKY, JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES (1982). For an application to contract law, see Farber, *Contract Law and Modern Economic Theory,* 78 NW. U.L. REV. 303, 332 (1983).

96. *See* Farber, *supra* note 95, at 335-39.

97. *See id.* at 329-33 (warranty disclaimers for consumer goods); Schwartz & Wilde, *Imperfect Information in Markets for Contract Terms: The Examples of Warranties and Security Interests,* 69 VA. L. REV. 1387, 1435-46 (1983) (consumer goods' failure rates and default rates on consumer borrowing).

98. *See* Tversky & Kahneman, *The Framing of Decisions and the Psychology of Choice,* 211 SCIENCE 453, 457 (1981) [hereinafter cited as Tversky &

in the everyday situations the experimenters appear to be interested in, the motivations may also reflect a greater willingness to use heuristic devices that may systematically create error in the result rather than to invest additional resources to ensure the correctness of the result.[99] This latter course of action, however, may be more common in commercial actors who negotiate at length inevitably uncertain, long-term contracts.[100] Correspondingly, the problem of systematic error generated by the use of heuristic devices is less in that context.[101]

Even if commercial actors are no more willing or able than consumers to "get it right," there may be less reason to intervene in an incorrect commercial judgment than is advocated for the consumer transaction. The reasons for this reluctance occupy much of the following section of this Article; in short, commercial actors may be in a position to guard, either through commercial insurance or through explicit agreements for risk sharing, against the adverse effects of uncertainty. Where

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Kahneman, *Framing*] (data obtained from university students who answered "brief questionnaires" in a classroom setting); Tversky & Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCIENCE 1124, 1130 (1974) [hereinafter cited as Tversky & Kahneman, *Judgment*] ("subjects were encouraged to be accurate and were rewarded for the correct answers"); *see also* Lopes, *supra* note 38, at 142-43 (pointing out failure of psychological decision theory to evaluate responses in light of participants' goals and aspirations). Participants in laboratory experiments may simply be trying to please or help the experimenters. *See* R. HARDIN, COLLECTIVE ACTION 30 (1982).

99. *See* Cohen, *Can Human Irrationality Be Experimentally Demonstrated?*, 4 BEHAVIORAL & BRAIN SCIENCES 317, 323-25 (1981).

100. Professors Alan Schwartz and Louis L. Wilde note the possible limits of their reliance on cognitive theory to interpret the propriety of legal rules: "Thought processes that routinely generate errors when persons are performing discrete, relatively simple tasks may work well in environments in which the actors make continuous decisions and receive feedback or in environments of great complexity." Schwartz & Wilde, *supra* note 97, at 1435 n.77.

101. Some of the psychological literature suggests that commercial actors may *overestimate* the likelihood of low probability events. Professors Amos Tversky and Daniel Kahneman suggest that people assess the frequency of an event by the ease with which instances or occurrences can be brought to mind. Tversky & Kahneman, *Judgment*, *supra* note 98, at 1127. This "availability" heuristic suggests that once a low probability event like an oil embargo occurs, its consequences will be provided for in subsequent contracts as actors attach an unrealistically high probability to its recurrence. Tversky and Kahneman also suggest that people discount the value of an uncertain outcome by a "decision weight" that varies from the probability of the event as dictated by utility theory. They further conclude that low probability events are overweighted so that the decision weight applied to such an event exceeds the event's objective probability. *See* Tversky & Kahneman, *Framing*, *supra* note 98, at 454; Kahneman & Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 ECONOMETRICA 263, 281-84 (1979).

these possibilities are forgone, bearing the risk that adverse effects will subsequently materialize may constitute a purposive and important part of the actors' entrepreneurial activity. In such a situation, less need or justification exists for state intervention in the form of legal rules to "correct" the decision maker's choice.

II. CHALLENGES TO THE MODEL: THE ARGUMENTS FOR A DUTY TO ADJUST

An advocate of a duty to adjust might agree that the above model of decision making under uncertainty is descriptively accurate but deny that it explains, from a normative perspective, the legal system's proper response to that process. After occurrence of a disruptive and uncertain event, the law could compensate for the inadequacies of the ex ante decision, regardless of their source, by adjusting the bargain to reflect what the parties would have done under conditions of certainty or risk. The law could, in effect, save the parties from the consequences of uninformed decisions even though they "did their best" or had an opportunity to "do their best" at the decision-making stage. Alternatively, the law may be relatively unconcerned about the welfare of the individual parties but concerned about the effects of their bargain on others. If bounded rationality or decision models predicated on subjective expected utilities of various outcomes preclude realization of a societally optimal allocation of resources, ex post intervention to achieve that state of affairs may be appropriate. This section will discuss more specifically two normative principles that underlie a duty to adjust, demonstrating in the process that, although these values may require refinement of the nonadjustment model, they do not support its abrogation.

A. THE RELATIONSHIP ARGUMENT

1. The Nature of the Relational Model

The nonadjustment model assumes that each party to a contract has dickered about terms to the extent necessary to serve its self-interest.[102] The model also assumes that this bargaining takes place against an individualistic background in which each party is permitted to pursue its own welfare. Self-interest, however, is not synonymous with apathy for the interests of others. Each party must consider the possibility that its

102. *See supra* notes 28-32 and accompanying text.

trading partner will willingly compromise when a risk not bargained about materializes. Self-interest may mandate a bargained term of mutual assistance, especially if a party believes itself more likely to need subsequent assistance than its trading partner. All that the model requires is that issues of prudence be resolved by reference to self-interest.

This model stands in contrast to a model of commercial arrangements involving what many have denominated "relational contracts."[103] Relational contracts are characterized by long-term arrangements, heightened uncertainty at the negotiation stage about future consequences of present acts, and the investment of resources unique to the transaction with which the contract deals. For proponents of the relational model, the relationship between the parties to such a contract creates obligations that transcend written terms. Implicit in the relationship is an interdependence that transforms each actor from one who is wholly self-interested to one committed to maximizing the welfare of what becomes a "joint enterprise."[104]

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103. Development of the relational model is usually attributed to Professor Ian Macneil. *See* I. MACNEIL, THE NEW SOCIAL CONTRACT: AN INQUIRY INTO MODERN CONTRACTUAL RELATIONS (1980); Macneil, *Values in Contract: Internal and External*, 78 NW. U.L. REV. 340 (1983) [hereinafter cited as Macneil, *Values*]; Macneil, *Contracts: Adjustment of Long-Term Economic Relations Under Classical, Neoclassical and Relational Contract Law*, 72 NW. U.L. REV. 854 (1978) [hereinafter cited as Macneil, *Contracts*]; Macneil, *The Many Futures of Contracts*, 47 S. CAL. L. REV. 691 (1974) [hereinafter cited as Macneil, *Many Futures*]; Macneil, *Restatement (Second) of Contracts and Presentiation*, 60 VA. L. REV. 589 (1974) [hereinafter cited as Macneil, *Restatement*].

104. *See* Goetz & Scott, *supra* note 14, at 1092. One advocate of adjustment explains the basis for the interdependence of parties in relational contracts as follows:

> In many exchange transactions, some aspects of the projection are complete and some are not. In a twenty year contract for the supply of coal, the subject, pricing formula, method of delivery, and duration may be spelled out. The relationship is relatively impersonal, tangible exchange is important, and a competitive market for coal may exist. On the other hand, the length of the contract puts strains on any effort to achieve complete initial projection. Despite careful negotiations and detailed planning, the initial agreement will probably fail to keep pace with change. At the same time, the transaction, because of high exit costs and specialized reliance, may be removed from the market. When these features are understood, the relational dimensions of the transaction come into sharper focus. For example, the possibility of trouble caused by change will be expected as normal (although the precise nature and impact will be unknown), and flexibility, cooperation, and adjustment will be regarded as essential. Both parties should understand at the outset that the long-term viability of the contract will depend upon continuing cooperation in performance and subsequent planning. In Macneil's scheme, these features of the long-term contract are relational rather than discrete.

The investment of specialized resources in relational contracts creates opportunities for the parties to take advantage of each other's position once the transaction is implemented. When a contract does not involve specialized resources, either party may leave the contract and reenter the market at a relatively low cost.[105] Opportunistic behavior by either party can be detected and remedied by comparison to other transactions in the market. When parties begin to invest resources in one transaction that are not readily transferable to other transactions, however, they cannot exit from the contract without sacrificing their investment and therefore leave themselves open to strategic moves by the other party.[106] As the relationship progresses and conditions change, each party, if unconstrained by principles of relational contract law, will attempt to seize as much of the gain and avoid as much of the loss generated by changed circumstances as possible.[107]

Simultaneously, at least according to some who subscribe to the relational model, a countervailing development occurs. As the relationship develops, it creates an atmosphere of mutual trust and adaptability between the parties; they become dependent on each other and solicitous of each other's needs.[108] Because investments of physical and human capital cannot be readily transferred to other transactions, initial costs return expected benefits only if the parties maintain their relationship.[109] If these aspects of the relationship can be used to fill the inevitable contractual gaps created by uncertainty at the bargaining stage, an efficient allocation of risks may be ex-

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Speidel, *Supply Contracts, supra* note 10, at 401-02.

105. Williamson, *Transaction-Cost Economics: The Governance of Contractual Relations,* 22 J. L. & ECON. 233, 239 (1979) ("[B]uyers in these circumstances can easily turn to alternative sources, and suppliers can sell output intended for one order to other buyers without difficulty." (citation omitted)).

106. Goetz & Scott, *The Mitigation Principle: Toward a General Theory of Contractual Obligation,* 69 VA. L. REV. 967, 1002 (1983).

107. An example of opportunistic behavior in the long-term supply contract context may be found in Fratelli Gardino, S.p.A v. Caribbean Lumber Co., 587 F.2d 204 (5th Cir. 1979). Seller had agreed to ship a certain quantity of lumber to buyer and subsequently claimed that insufficient shipping facilities were available to meet contract requirements. The court rejected a U.C.C. § 2-615 contention of excuse when it discovered that the seller had a sister company that was able to provide facilities but that had apparently favored other contracts that commanded a higher price.

108. *See* Gottlieb, *Relationism: Legal Theory for a Relational Society,* 50 U. CHI. L. REV. 567, 569-73 (1983).

109. *See supra* text accompanying notes 103-04.

pected to exist at all times during the contract.[110] Beyond efficiency, gap filling by reference to the relationship also serves norms of respect for others, preserving the relationship and harmonizing conflict.[111] Recognition of potential gains if these aspects of the relationship dominate has caused some to propose legal rules that neutralize opportunistic behavior within the relationship while fostering the mutual reliance and confidence that stimulates continuation of the relationship.[112]

The relational model, then, recognizes the existence of uncertainty but confronts it in a very different manner from the individualist model of nonadjustment. In the relational model, reassuring interdependence compensates for present ignorance of contingencies that precludes fully informed risk allocations. The parties pledge to cooperate in the future not only with respect to agreed-on performance[113] but also with respect to resolving difficulties not anticipated at the negotiation stage. By construing the parties' agreement to contain an implicit promise to assist one another when a disruptive event arises, the relational model expresses a preference for resolution of conflict through compromise and conciliation rather than through adversity and litigation. It is a heroic vision, almost utopian in its implications for the mutual obligations of contracting parties. The commentators' language describing the ensuing relationship reflects the parties' interdependence. Far from adversaries, parties to a relational contract stand in a "quasi-fiduciary" relationship to one another;[114] they are in a "moral partnership" or an arrangement with a "partnership-like quality,"[115] a "minisociety with a vast array of norms beyond the norms centered on exchange and its immediate processes."[116] As partners, legal or moral, and as fiduciaries, each party owes the other a duty to adjust the original bargain

110. Williamson, *supra* note 105, at 239-42.

111. Macneil, *Values, supra* note 103, at 360.

112. As an example of how legal rules might capture the benefits of the relation, Professors Charles J. Goetz and Robert E. Scott suggest that courts attempting to infuse "best efforts" clauses with a more concrete standard of performance look for that level of performance that maximizes the output of all parties to the transaction, even if that point varies from the one that would maximize one of the parties individual welfare. Goetz & Scott, *supra* note 14, at 1112-17.

113. U.C.C. § 2-311(3) imposes an obligation to cooperate where necessary to accomplish an agreed performance.

114. Speidel, *Supply Contracts, supra* note 10, at 407.

115. Harrison, *A Case for Loss Sharing,* 56 S. CAL. L. REV. 573, 575, 586 (1983).

116. Macneil, *Contracts, supra* note 103, at 901.

when a contingency arises that was not allocated and that would render the agreement unduly unfavorable to the other party.[117]

2. The Validity of the Relational Model

The relational model suggests that parties who act opportunistically are chiseling[118] at the core of the relationship. Maintaining the relationship requires legal principles that the aggrieved party may use to force the opportunistic actor back into consideration of joint interests. This invocation of law to require adjustment between the parties to relational contracts rests on two often unstated assumptions: first, that opportunism will cause an undesirable breakdown of the relation in the absence of constraints and, second, that uncertainty prevents the parties from providing the necessary constraints at the negotiation stage. Although the first assumption may be accurate, it does not lead inexorably to the adoption of a duty to adjust. The reason for this is that the second assumption fails to recognize self-help remedies that the parties may employ to maintain the relationship. Given the assumption of self-interest,[119] opportunistic behavior is to be expected. Insofar as opportunism merely shifts wealth between the parties without creating any new wealth, it constitutes undesirable, wasteful activity from a societal perspective.[120] Thus, the desire of advocates of relationalism to constrain such conduct is well-founded.

Constraints on opportunism, however, may be generated by forces external to both the law and the contract. Commercial actors do tend to work out difficulties that result from disruptive events, to renegotiate previously struck bargains, and to resolve disputes amicably without resort to legal process. The written contracts in these cases constitute "a rough indication around which [real working] relations vary."[121] Businesses draft contracts with seeming inattention to legal consequences, perhaps out of ignorance, but perhaps with the intention that

117. Goetz & Scott, *supra* note 106, at 1002.

118. *See* Goetz & Scott, *supra* note 14, at 1114-17.

119. *See supra* notes 28-32 and accompanying text.

120. Muris, *Opportunistic Behavior and the Law of Contracts*, 65 MINN. L. REV. 521, 522 (1981). Of course, efforts to control opportunistic behavior also impose costs and, in some instances, those costs could exceed benefits by introducing uncertainty about the scope of contractual obligations in all commercial contracts. *See* Gillette, *Limitations on the Obligation of Good Faith*, 1981 DUKE L.J. 619, 664-65.

121. Llewellyn, *What Price Contract?—An Essay in Perspective*, 40 YALE L.J. 704, 737 (1931).

extralegal measures will resolve any problems that arise.[122] Much of the motivation for these adjustments may lie in the relational interdependence of the parties and a sense that development of commercial practice favors modification and disfavors litigation in light of new circumstances.[123]

More pragmatic considerations also encourage adjustment and discourage dissolution of the relationship. The parties may recognize that the uniqueness of their relationship makes any substitution with another actor more difficult and more expensive to obtain.[124] As the parties invest resources specific to the transaction and exit becomes more expensive, the parties create a bilateral monopoly—each side desires something that can be obtained only from the other party without incurring prohibitive costs.[125] When a disruptive event occurs, the disadvantaged party may regret its initial involvement in the transaction, but it is not without leverage. Because the advantaged party has also invested resources in the creation and maintenance of the relationship, the advantaged party has incentives to adjust voluntarily, as long as the cost of adjustment is less than the cost of creating a replacement relationship.

These voluntary adjustments may still involve costly renegotiations as advantaged and disadvantaged parties opportunistically reallocate the gains of the transaction.[126] A legal obligation that enforces the adjustment goal may then be defended as a means of reducing "costly haggling."[127] By no means clear, however, is the conclusion that imposition of a

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122. *See* Macaulay, *Non-Contractual Relations in Business*, 28 AM. SOC. REV. 55, 58-59 (1963); Macaulay, *The Use and Non-Use of Contracts in the Manufacturing Industry*, PRAC. LAW., Nov. 1963, at 14-15; Mueller, *Contract Remedies: Business Fact and Legal Fantasy*, 1967 WIS. L. REV. 833, 836; White, *supra* note 24, at 14-18.

123. *See* Llewellyn, *supra* note 121, at 718 ("Promise, performance and adjustment are in this sense primarily extra-legal. It needs no argument that if they did not normally occur without laws' intervention, no regime of future dealings would be possible."); White, *supra* note 24, at 16-17.

124. *See* Williamson, *supra* note 105, at 240.

125. *Id.* at 241; *see* Gottlieb, *supra* note 108, at 570 ("The degree of mutual dependence between lenders and [sovereign] borrowers is such that neither side can escape unhurt if the other fails.").

126. *See* Goetz & Scott, *supra* note 106, at 982-83. Of course, the expected cost of renegotiation may be factored into the original transaction. This may be particularly true where renegotiation is an accepted part of a course of dealing, as in the case of rescheduling debts of foreign nations. *See* Gottlieb, *supra* note 108, at 572-73.

127. Williamson, *supra* note 105, at 242; *see also* Goetz & Scott, *supra* note 106, at 1002 (common law courts have created doctrines applicable to certain contracts incorporating both performance and readjustment responsibilities).

legal obligation to adjust will reduce haggling. If the bilateral monopoly exists, the issue is not whether the parties will adjust, but what the new bargain will look like. Negotiations are directed to that issue, and the outcome is no more certain when the parties bargain under threat of legal sanction than when they bargain voluntarily. Thus, it is not clear that imposition of a duty to adjust reduces postevent negotiation costs below those expectable from voluntary bargains for adjustment.[128]

The frequency of adjustment in the relational model suggests another extralegal device that reduces the need for a legal obligation to adjust in order to maintain the relationship. If adjustment is the standard, then a nonadjusting party incurs reputational injury by its refusal to adjust. Although some have argued that relational contracts do not trigger reputational concerns because of their specialized nature,[129] just the opposite may be true. Because the termination of long-term relationships causes greater dislocation than the termination of more discrete transactions,[130] actors may choose their partners in such arrangements with greater care. Thus, a reputation for mutual assistance may be an important asset in these transactions.[131] Due to the long-term nature of relational contracts, parties might be reluctant to deal with anyone who has a tarnished reputation[132] and more willing to invest resources to de-

128. Moreover, even if the obligation exists, a party who seeks to enforce the contract as written rather than adjust is subject to the promisor's threat not to perform. Under U.C.C. § 2-716(1), specific performance for a breach of contract to sell goods is available "where the goods are unique or in other proper circumstances." Mere increase in price is generally insufficient, because the aggrieved party can be made whole by money damages. Thus, in the absence of a more liberal allowance for specific performance, imposition of a legal obligation cannot ensure the continuation of an otherwise defunct relationship.

129. Goetz & Scott, *supra* note 106, at 1013 n.122.

130. *Cf.* Macneil, *Contracts*, *supra* note 103, at 876-80 (contrasting possible consequences of discrete and long-term contracts).

131. Reputation may similarly compensate for the inability of actors to write a contract that provides for all possible states of the world that could subsequently materialize. *See* Palay, *Comparative Institutional Economics: The Governance of Rail Freight Contracting*, 13 J. LEGAL STUD. 265, 275-78 (1984). On the role of reputation as a governance device in contract law generally, see Kornhauser, *Reliance, Reputation and Breach of Contract*, 26 J.L. & ECON. 691, 693-95 (1983); Leff, *supra* note 86, at 24-26.

132. Similarly, supply contracts may exist with more than one party at a time, and reputational injury incurred in one transaction may well carry over into the other transactions and jeopardize the nonadjusting party's other relationships. *See* Goldberg, *The Law and Economics of Vertical Restrictions: A Relational Perspective*, 58 TEX. L. REV. 91, 98 n.22 (1979).

termine whether a potential trading partner's reputation is tarnished. Thus, present offers to adjust may not only save the current relationship but expedite the formation of future ones.

3. Ex Ante Allocational Devices

In short, parties to relational commercial transactions seem to be those most capable of making and motivated to make determinations required by conditions of uncertainty. This conclusion suggests they are least in need of judicial enforcement of an obligation to adjust.[133] Proponents of adjustment may nevertheless object that if adjustment is the norm in long-term contracts, a refusal to adjust may present a victim with unfair surprise. If a party has been lulled by a custom and practice of adjustment, the obligation described by the custom and practice ought to be implied in all such contracts.[134] The state, therefore, may intervene to protect the expectations of a party that it would not be left in the lurch by a trading partner after occurrence of a disruptive event.[135]

This argument, however, may prove too much. The existence of a custom and practice of adjustment in a particular contractual setting indicates that parties in that setting are comfortable with the allocation of risks that flow from that cus-

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133. Evidence that parties to relational contracts are willing to adjust original contract terms in the face of changed circumstances is found in Palay, *supra* note 131, at 279-85. Professor Thomas M. Palay indicates that parties to long-term contracts with idiosyncratic investment characteristics have specialized governance mechanisms that permit the parties to work out potentially disruptive problems. *See id.* at 287. What is interesting about the contracts Palay studies is that they involved agreements unenforceable in a court of law and presumably known to be so by the parties. Thus, the threat of legal sanction played no role in keeping the parties together. That role was therefore delegated to private mechanisms such as the profit incentive, good business relations, and reputation.

134. *See* U.C.C. § 1-205. On the derivation of rights from a practice in the contractual context, see P. ATIYAH, PROMISES, MORALS AND LAW 106-22 (1981).

135. Neither legal nor extralegal constraints prevent the ultimate breakdown between parties to relational contracts in all cases. On the other hand, it has never been assumed even by those who value highly the continuation of relations that relational contracts never terminate unhappily. *See* Macneil, *Contracts, supra* note 103, at 899-900. Thus, the issue for those who would impose a legal duty to adjust is whether marginal gains would result with a legal adjustment obligation. At this point, however, the whole notion of enforcing a legal obligation to save the transaction seems a bit incongruous. If matters have gone so far, notwithstanding all the extralegal constraints, there probably is little of the relation left to save. This is reminiscent of the justification for interfamily tort immunity predicated on maintaining harmony within a family whose members seek legal redress against one another. *See* Briere v. Briere, 107 N.H. 432, 434, 224 A.2d 588, 590 (1966).

tom. Enforcement of the custom recognizes the implicit risk allocation without requiring the parties to incur the costs of making that allocation explicit. The ability of parties implicitly to agree to adjust if a disruptive event materializes, however, belies the second assumption of the relational model, that uncertainty prevents the parties from controlling opportunism at the negotiation stage.[136] The need for a state-imposed duty presumably would dissipate if parties, acting under uncertainty, could reach ex ante agreements that implicitly or explicitly allocate the risk of subsequent events.[137] Thus, if parties can, through a recognized custom or practice, implicitly allocate risks under conditions of uncertainty, then perhaps they can also make explicit allocations in the absence of a custom or practice. If such is the case, the argument for adjustment as a legal obligation seems weaker still.[138]

The kinds of arrangements the parties could negotiate to neutralize subsequent strategic behavior may be examined in the proposed transaction between Supplier and Printer. Assume that Supplier would like to lock Printer into a long-term relationship to ensure a steady market for its output. Nevertheless, Supplier is aware that a variety of events that it cannot currently quantify or identify may undermine the profitability of any contractual arrangement it currently enters and fears that Printer may seize on a subsequent event to Supplier's disadvantage.

Notwithstanding this uncertainty, Supplier would be willing to participate if it could reduce to an acceptable level the possibility that, should such an event occur, Printer would favor its own interests over those of Supplier. In short, Supplier, although ignorant of future events or incapable of calculating their probability or their effect, would like to find a solution that controls the consequences of future events. What decision strategies might Supplier adopt?

Supplier could expend significant resources in contemplating, quantifying, and allocating the risk of every event that might materialize during the contract term. It could attempt to

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136. *See supra* text accompanying note 118-20.

137. Goetz & Scott, *supra* note 14, at 1116-17.

138. Of course, the ability of the parties to structure a bargain raises questions about the efficacy of any state-imposed clause, since parties may bargain to another solution. *See supra* text accompanying notes 118-37; *infra* text accompanying notes 139-54. At this point, this ability is used only to test the assumption of the relational model that uncertainty precludes rational allocation of risk in relational settings.

identify consequences of contractual terms under specific conditions, assign probabilities to each condition and values to each consequence, and select the term that promises the highest subjective expected utility from the resulting matrix.[139] The concept of bounded rationality, however, suggests that some risks will remain unidentified and unquantified.[140] Moreover, even if the parties could identify and quantify all risks, the costs of those processes and of negotiating with respect to them would probably outweigh the expected loss from a remote risk.

If the only choices are to ignore uncertainty or to attempt to bargain to the point where all risks are identified and allocated, Supplier may take the former course and, if any disruptive event occurs, hope to persuade a court to resolve any dispute after the fact by any means, including adjustment, deemed reasonable. Supplier is not, however, faced with these choices alone. Supplier could adopt a variety of contractual clauses embodying other decision strategies. Organization theory suggests that commercial actors can select from among these clauses one that is "good enough" to achieve the desired outcome. Once that selection occurs, the crucial issue is no longer the factual question of whether the parties considered a specific risk but the normative question of whether the law should respect decisions made by the parties concerning the manner in which they deal with a recognized inability to specify all risks. The analysis above suggests that the answer depends on whether the parties had opportunities to allocate the risks consistent with their beliefs about the effects of uncertainty. The bargaining that typically precedes the creation of a long-term contract suggests that those opportunities are substantial enough to preclude judicial reallocation.[141]

Supplier, for instance, may be particularly averse to unidentified or unquantified risks that it could suffer from a disruptive event. Such an aversion, however, would not necessarily lead Supplier to eschew the entire transaction or to

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139. This mode of decision making would be consistent with Bayesian decision theory. *See* E. EELLS, *supra* note 76, at 4-23. For critiques of applying Bayesian analysis to legal rules, see Brilmayer & Kornhauser, *Review: Quantitative Methods and Legal Decisions,* 46 U. CHI. L. REV. 116, 135-52 (1979); Kaye, *Probability Theory Meets Res Ipsa Loquitur,* 77 MICH. L. REV. 1456, 1464-81 (1979); Tribe, *Trial By Mathematics: Precision and Ritual in the Legal Process,* 84 HARV. L. REV. 1329, 1332-76 (1971).

140. *See supra* notes 70-71 and accompanying text.

141. *See, e.g.,* Columbia Nitrogen Corp. v. Royster Co., 451 F.2d 3 (4th Cir. 1971) (failure of parties to agree on clause covering undelivered phosphate after bargaining about the issue indicates willingness to accept trade custom).

proceed, with fingers crossed, hoping that a relational judge decides the case if adjustment becomes desirable. Instead, Supplier would be able to negotiate the contract using decision strategies that take into account its particular risk aversion. These strategies would follow a "maximin" criterion, by which Supplier attempts to maximize the value of the minimum position in which it would find itself should a disruptive event interfere, even if choices consistent with that criterion leave open the possibility that Supplier will be worse off if a disruptive event does not occur.[142]

Pursuit of a maximin strategy, however, does not lead inexorably to a single type of contractual clause; the commercial actor must consider which among several clauses will provide it with the greatest net benefit should a disruptive event occur. Supplier, for instance, might try to preempt any opportunistic conduct by Printer by including a clause that permits Supplier to exercise sole discretion should the materialization of an unspecified risk make complete performance unprofitable.[143] Assuming that Printer would attempt to exact a high price in the contract for such discretion, Supplier would probably be required to sacrifice some of the expected gain from the contract in order to avoid a remote probability of a loss. Nevertheless, evidence exists that commercial parties seek such control. In his study of allocation of production in chemical supply con-

142. *See* R. LUCE & H. RAIFFA, *supra* note 33, at 278-80. Assume, for instance, that Supplier believes that if no disruptive event occurs, the contract will be worth 20, but that if a disruptive event occurs the contract will be worth -10. It believes that the event as likely as not will occur, i.e., a .5 probability. Assume further that at the negotiation stage, Supplier can bargain for either of two clauses that will govern should the event occur: to share gains and losses equally with Printer or to permit gains and losses to remain where they fall. Supplier thus confronts the following payoff matrix:

	Event	No Event
Share	$1/2(.5 \times -10) = -2.5$	$1/2(.5 \times 20) = 5$
Do Not Share	$(.5 \times -10) = -5$	$(.5 \times 20) = 10$

Under a maximin strategy, Supplier will choose to share because sharing will minimize its maximum loss should the event occur, even though it thereby surrenders the possiblity of a greater gain in the event that it does not share and no disruptive event occurs.

143. For instance, a party might bargain for the right to terminate the relationship at any time, a power likely to be exercised when demand for the product that is the subject of the contract declines. *See, e.g.,* Cardinal Stone Co. v. Rival Mfg. Co., 669 F.2d 395, 396 (6th Cir. 1982); Corenswet, Inc. v. Amana Refrigeration, Inc., 594 F.2d 129, 138 (5th Cir.), *cert. denied,* 444 U.S. 938 (1979).

tracts after shortages made full performance impracticable, Professor James White found numerous attempts by sellers to reserve to themselves the major role in the allocation process.[144] A few of these contracts purported to permit the seller the right to allocate in any manner without regard to the interests of the other party.[145] The relatively small number of attempts to retain complete control suggests that if sellers considered this type of clause at all, they either were unwilling to pay the price of such a clause or were concerned that such a clause would not be enforced even if included.

Abandonment of this particular clause, however, does not require abandonment of a maximin strategy. Supplier might try other tactics for minimizing potential losses, such as bargaining for a clause that obligates Printer to take account of Supplier's interests or that induces Printer to treat Supplier's interests as its own. Supplier could, for instance, explicitly contract for a fiduciary relationship in which each party is obligated to place the mutual interests of the parties in the enterprise in which they join above their personal interests. This could be accomplished by creating a partnership or joint venture to provide for the supply of paper from Supplier to Printer. The variety of linkages that might unify the interests of the parties, and thus minimize the risk that Printer will act strategically at Supplier's expense, extends all the way to the point at which Supplier and Printer merge into a single, vertically integrated firm so that the interests of the parties are coterminous.[146]

As Supplier moves along the spectrum of linkages, however, it necessarily surrenders part of its independence, restricts its ability to deal with other customers that compete with Printer, and subjects itself to costly regulatory schemes that might be avoided if separate operations are maintained.[147]

144. White, *supra* note 24, at 6-10.

145. Professor James J. White suggested that these attempts to retain complete control over the situation might run afoul of statutory obligations of "good faith" or "fair dealing." If the overall bargain reflected that chemical purchasers were compensated for the possibility of subsequently abdicating control over allocations, however, it would be difficult to demonstrate where bad faith had existed. *See id.* at 8.

146. Of course, even within the same firm Supplier and Printer would face difficulties of monitoring each other's behavior to ensure compliance with the objective of maximizing joint interest rather than individual interest. *See* Jensen & Meckling, *supra* note 28, at 305.

147. *See* Goldberg, *supra* note 132, at 102-03. For instance, vertical integration may trigger antitrust inquiries that the actors would prefer to avoid.

Attempts to find a convenient midpoint along the spectrum are also likely to be costly. For instance, Supplier might bargain for a requirements term that permits it to supply all Printer's paper needs during the contract period. This would provide Printer with some incentive to work out subsequent price adjustments that keep the relationship on an even keel. Nevertheless, the requirements device is not foolproof. Printer may seek close substitutes for the product it purchases from Supplier and claim that it no longer has "requirements" for Supplier's goods. Conversely, if the contract price of the goods falls below the expected market price, Printer may increase its "requirements" and stockpile the goods for a time when the market price rises.[148]

Supplier might also attempt to cement the relational elements of the agreement through an express requirement that manifests the parties' intent to cooperate. Toward this end, Supplier might seek a clause that gives both parties a role in working out the post-event relationship. Most obviously, Supplier could negotiate for a term allowing it to reopen the bargaining if some disruptive event occurs.[149] Such a clause would maintain the independence of the parties, but the factors discussed above that make exit from the transaction difficult would induce the advantaged party to be attentive to the welfare of the disadvantaged party or risk dissolution of a profitable transaction.

In an alternative attempt to induce mutual aid after a disruptive event, Supplier may bargain for a standard against which subsequent conduct may be measured. For instance, Supplier may bargain for a term that permits it to avoid the contract with impunity if it cannot satisfy Printer's needs after exercising "best efforts" towards that end, measured against a trade custom that identified "best efforts" with maximizing the joint interests of the parties rather than self-interest. This clause, too, is problematic in that it largely leaves to a court the difficult task of measuring the adequacy of post-event performance. Even where commentators have sought to define more rigorously the standard of performance required by such a clause, they have not ignored the practical difficulties of ad-

148. *See* Homestake Mining Co. v. Washington Pub. Power Supply Sys., 476 F. Supp. 1162 (N.D. Cal. 1979).

149. Speidel notes the presence of such clauses in coal supply contracts. *See* Speidel, *Supply Contracts, supra* note 10, at 407 n.167; *see also* Tannenbaum, *supra* note 9; Goldberg, *supra* note 29.

ministering a vague standard.[150]

Each of these tactics is intended to place Supplier in a position to reduce losses should it be the victim of a disruptive event. Although none is cost free, the variety of available clauses suggests that Supplier is in a position to select in a deliberate, rational manner a clause that will best maintain the relationship in the face of an uncertain future. That strategy would be suitable if Supplier believed itself relatively likely to be disadvantaged with the passing of time. But Supplier, acting under uncertainty, may not suffer from the risk aversion that leads to adoption of a maximin strategy. Instead, Supplier might adopt a strategy, consistent with the Principle of Insufficient Reason, that reflects a belief that a disruptive event is no more likely to affect it adversely than to affect Printer adversely.[151] In the absence of any reason to think its own exposure to disruptive events is greater or less than that of Printer,

150. *See* Goetz & Scott, *supra* note 14, at 1116-17.

151. *See* R. LUCE & H. RAIFFA, *supra* note 33, at 284-86. Attractive as this strategy may be to a party bargaining under uncertainty, it is not without significant costs. The first difficulty arises in trying to categorize the events to which equal probabilities are to be assigned. Supplier might, as suggested above, begin by assuming that a disruptive event could be either beneficial or harmful to it and thus assign a .5 probability to each possibility. Supplier might, however, adopt a different tactic, attempting to list all the individual events that might occur and assigning an equal probability to each such event. Unless the events were equally divided between beneficial and adverse events, this procedure would lead to a very different result from the assumption of equal probability of being harmed or benefitted by a disruptive event. There is no way, however, to select between the two procedures under a condition of uncertainty. Robert Wolff makes the same point in his discussion of the Principle of Insufficient Reason as an alternative to Rawls's maximin solution for rational behavior under uncertainty. Wolff suggests that in determining whether a die will, when tossed, come up with a 4, any of the following procedures may be used consistent with the Principle:

> (a) There are six sides to the die, and thus the chance of tossing a 4 is 1/6.
> (b) The die will come up a 2, 4, 6, or an odd number, and thus the probability of a 4 is 1/4.
> (c) The die will either come up a 4 or not, and thus the probability of tossing a 4 is 1/2.

See R. WOLFF, UNDERSTANDING RAWLS 164-65 (1977). Wolff concludes:

> If we *really* are ignorant of the probabilities of various outcomes, then we have no way of knowing what the proper classification of outcomes is. Or to put the same point differently, our classification is simply a summation of our beliefs about the situation, so we cannot divide the outcomes up and then blandly deny that we know which of them is more likely.

Id. at 165 (emphasis in original); *see* R. LUCE & H. RAIFFA, *supra* note 33, at 284-85.

Thus, notwithstanding the initial rationality of applying equal probabili-

Supplier might assign an equal probability to its being adversely or beneficially affected by a disruptive event. Supplier might adapt to this situation by bargaining for a clause that allowed, but did not require, the advantaged party to adjust and assist the disadvantaged party. For instance, Supplier might bargain to peg the contract price to some historical index that it believes will reflect a proper price for the product or to place a maximum on subsequent price increases or decreases. Similarly, Supplier could bargain for a "gross inequity" clause, requiring a sharing of information that would permit the advantaged party to decide whether and how much to assist, without requiring any assistance whatsoever.[152] Finally, Supplier might seek to allocate the risk of uncertainty through selection of a measure of damages for breach of contract.[153] If Supplier chooses a clause implementing a strategy that assumes either side is equally likely to benefit or suffer from a disruptive event, it has little complaint should the clause subsequently fail to minimize its losses. That risk appears to have been implicitly allocated with the choice of the clause, selected on the gamble that it would work to Supplier's ultimate advantage.[154] Even if Supplier subsequently regrets its assignment of equal probabilities, it did not act irrationally.

Supplier may also seek to avoid the consequences of disruptive events by appeal to third parties. It may, for instance, bargain for a clause that future disagreements will be submitted to binding arbitration. Alternatively, it may seek a clause that permits a court hearing any dispute to "do justice" between the parties, as determined at the time at which the dispute arises. The parties may thus take their chances that they will draw a relational judge. Indeed, the parties may contractually agree that a judge should use a relational standard in resolving any dispute between them. Although this tactic may not bind the judge, it may provide the judge with guidance in any attempt to implement the expressed intention of the parties.

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ties to each possibility, Supplier, aware of the shortcomings of such a strategy, might reject it as inferior even to a maximin tactic.

152. *See* Georgia Power Co. v. Cimarron Coal Corp., 526 F.2d 101 (6th Cir. 1975); Duesenberg, *supra* note 9, at 53-54.

153. *See* Polinsky, *Risk Sharing Through Breach of Contract Remedies*, 12 J. LEGAL STUD. 427 *passim*. (1983).

154. *See* Eastern Air Lines, Inc. v. Gulf Oil Corp., 415 F. Supp. 429, 432-33 (S.D. Fla. 1975); Publicker Indus., Inc. v. Union Carbide Corp., 17 U.C.C. Rep. Serv. (Callaghan) 989, 990-92 (E.D. Pa. 1975); Missouri Pub. Serv. Co. v. Peabody Coal Co., 583 S.W.2d 721, 726-28, *cert. denied*, 444 U.S. 865 (1979).

Neither of these strategies—the maximin criterion or the Principle of Insufficient Reason—ensures that Supplier, looking back at the end of the contract or after a disruptive event, will believe it struck the optimal bargain. Each strategy involves costs that may not be recaptured. If no disruptive event materializes, an actor that compensated its trading partner in order to occupy a superior position in such an event may regret its decision; if the event does occur, an actor that gambled on self-insurance may regret that decision. Still, the availability of various strategies reflects the ability of actors faced with uncertainty to choose among options and strike bargains consistent with their estimates of probable consequences and their levels of risk preference. Consequently, if commercial actors have included one of the above clauses in the contract, courts generally consider them to have allocated the possibility of a subsequent disruptive event and decline to second-guess that judgment. In short, the courts treat such clauses, quite justifiably, as the product of a rational, deliberate process, worthy of respect, despite the condition of uncertainty at the time of drafting. The results reached may not be optimal, but they are "good enough"—good enough to reduce the uncertainty of the parties to an acceptable level, and good enough to constitute a rational allocation based on the desires and preferences of the parties during negotiations that diminishes the need for ex post judicial intervention.

4. Failure to Allocate Risks Ex Ante

The availability of risk-allocation devices under a condition of uncertainty may provide reasons for courts to avoid intervention where the parties have integrated a device into their agreement, but this leaves open the cases in which no such provision has been made. Ought the law to presume that the parties desired adjustment to be judicially imposed unless they agreed otherwise,[155] or ought it to presume that the parties desired adjustment only when they provided for it specifically? Proponents of adjustment may argue that the presumption should be in favor of adjustment because several of the decision strategies for dealing with uncertainty reveal a desire for some level of risk sharing. The creation of a state-imposed gap filler that reflects *no* sharing, such as avoiding the contract or enforcing it

155. If adjustment were judicially imposed, a court would still have to work out the issue of what the adjustment would look like, i.e., excuse or modification.

as originally drafted, therefore seems incongruous. This incongruity dissipates only if the failure of commercial actors to provide expressly some loss-sharing mechanism signals a desire not to share.

The basic premise of this argument is that the parties would have provided for adjustment had they bargained about the specific event that occurred.[156] The problem with this approach, however, is evident: lacking omniscience, the courts are simply not capable of determining with any assurance what the parties would have provided. The ex post, self-interested, and probably conflicting testimony of the parties is not likely to be much help. Consequently, this presumption of agreement to adjust has been attacked as an effort by the courts to impose their will on the parties under the pretense of calling it the parties' own.[157] Judicial determination of what the parties would have done seems especially questionable in situations of uncertainty, where ascribing to the parties *any* contemplation of the specific event is difficult.

A related argument supporting adjustment, noted at the outset of this Article,[158] is that a legal requirement of adjustment would be appropriate if most commercial parties, left to bargain between themselves concerning uncertainty, would agree to adjust when events of low probability intervene to skew the original expectations. If such were the case, a legal rule imposing that same clause on parties who were otherwise silent on the issue would make such agreements unnecessary and thus reduce transaction costs. The variety of clauses discussed above, however, and apparently used in the more fully bargained contracts that characterize relational commercial transactions, indicates that no clear majority rule exists with respect to clauses that attempt to deal with uncertainty.[159] Consequently, there is no easily recognizable clause which, if

156. Professor Farnsworth quotes Jeremy Bentham for the proposition, with which Farnsworth disagrees, that courts should remedy "the shortsightedness of individuals by doing for them what they would have done for them selves [sic] had their imagination anticipated the march of nature." Farnsworth, *supra* note 13, at 879 (quoting J. BENTHAM, *A General View of a Complete Code of Laws,* in 3 THE WORKS OF JEREMY BENTHAM 191 (Bowring ed. 1848)); *see also* Schlegel, *supra* note 27, at 443 ("[I]t is difficult to understand how the parties could have agreed how to handle an event which by hypothesis they neither expected nor foresaw.").

157. Farnsworth, *supra* note 13, at 879-81; P. ATIYAH, *supra* note 134, at 89.

158. *See supra* notes 19-20 and accompanying text.

159. *See* Schlegel, *supra* note 27, at 438-40; Speidel, *Supply Contracts, supra* note 10, at 396-400; *supra* notes 21-23 and accompanying text.

codified into a rule of law, would reduce overall transaction costs.

Proponents of adjustment have also attempted to use game theory to demonstrate that nonopportunistic parties in a relational contract would have agreed to adjust their bargain had they considered the disruptive event that subsequently materialized, and that the law therefore ought to impose the same result on the parties to prevent opportunism. Using this logic, Professor Jeffery Harrison contends that parties ignorant of legal allocations and incapable of taking advantage of each other would adopt a maximin strategy of cooperation at the negotiation stage to resolve disputes that subsequently arise.[160] Harrison's model further assumes that each party believes it stands an equal chance of suffering harm from a disruptive, uncertain event, so that in the absence of a loss-sharing rule, each party believes it bears an equal chance of suffering the entire loss or none of it. The expected value to each party of an unallocated disruptive event, therefore, equals one-half its actual value, discounted by the probability of occurrence. If the parties agree beforehand to share the loss, they will also face an expected value of one-half the actual value of the loss, discounted by the probability of occurrence. Each party will choose the latter course, Harrison argues, because it will adopt a maximin strategy of cooperation, even though there is a situation in which it would do better—the situation in which there is no sharing of risk and the event would impose a loss only on the other party.

Despite some difficulties with his model,[161] Harrison's conclusion that parties may choose a maximin strategy of sharing losses seems credible. If the actors are even slightly risk averse, they will be willing to surrender part of the potential benefit in order to avoid part of the potential loss if they consider themselves as likely as their trading partners to require assistance as a result of an intervening event.[162] Thus, the ar-

160. Harrison, *supra* note 115, at 595-601.

161. For instance, Harrison assumes that an event would generate a loss of equal value to each party to the contract, so that the expected loss of the event would likewise be the same to each party. His question then becomes how to allocate that loss once it has occurred. In fact, an event could generate losses of varying amounts to the parties, and the resulting difference in expected losses in the absence of a sharing rule could affect the parties' willingness to share. *See id.* at 596-99.

162. In addition, there is some support for the proposition that maximin strategies are most likely to be adopted in two-party bargaining situations

gument goes, because most parties would have agreed to ex ante loss sharing, the law may properly impose ex post adjustment.

There are two problems with converting these particular decision-making principles into a legal rule. First, as suggested above, rational actors facing uncertainty may select among a variety of decision strategies and are not driven inexorably to a maximin solution or to a particular maximin solution. Alternative strategies may evidence an unwillingness to share losses, or at least an unwillingness to be obligated to do so. Should this result obtain in more than idiosyncratic cases, neither the moral nor the efficiency justification for loss sharing based on the silent intention of the parties may prevail. Second, Harrison's invocation of a Rawlsian veil[163] behind which actors are assumed to scrutinize possible future states ignores the possibility that commercial bargainers may have legitimately obtained information that allows for rational allocation of risk without loss sharing. If each actor, based on subjective beliefs achieved after making judgments permitted by bounded rationality, believes itself to be in a superior position to control subsequent uncertainty, then neither will desire a loss-sharing strategy. Instead, each party will desire the transactional structure that allows the one who guesses correctly about the future to obtain the gains of uncertainty. The models on which Harrison draws to assume risk aversion involve actors who cannot coordinate or communicate with one another, so that bargaining to a mutually satisfactory solution to uncertainty is impossible.[164] For this reason, the parties are driven to maximin positions. The contractual context of a long-term supply contract, however, obviously contains no such constraint, and no "veil of ignorance" is required to obtain the benefits of cooperation when the parties can communicate and coordinate with one another. The fact that contracting parties subsequently regret the bargains they made does not require invocation of a model that assumes the absence of any bargain at all.[165]

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where the consequences of any strategy are relatively easy to calculate. *See* R. WOLFF, *supra* note 151, at 55.

163. Harrison, *supra* note 115, at 596 n.127.

164. Harrison seems to approach the problem as a Prisoners' Dilemma, in which the players are prevented from communicating with one another. *See* R. JEFFREY, *supra* note 15, at 15-18; R. LUCE & H. RAIFFA, *supra* note 33, at 94-97.

165. It should be remembered that Rawls selects a pessimistic maximin position because the parties behind the veil have a high level of ignorance about matters that would otherwise be material to their choices. "The essential

5. Contract as Individual Expression

The idea that rational actors would be willing, in some situations, to accept the consequences of uncertainty even though those consequences and the resulting expected losses could be reduced through ex post adjustment reflects a basic distinction between the theoretical underpinnings of a paternalistic relational contract theory and a theory of contract as a mechanism for autonomous individual expression.[166] As is evident from the jargon of fiduciary responsibility that accompanies the relational model,[167] parties to the relationship owe obligations to one another exceeding those derived directly from contractual terms. If this jargon is accepted as accurately depicting the elements of the relationship, relationalism must be recognized as a transformation of classical contract to the more nebulous realm of fiduciary relations.[168] The distinction between the two is reinforced by Professor Arthur Jacobson's forceful argument that contract is an expression of individual sovereignty and private ordering that is the very antithesis of the fiduciary nature of "relational contracts."[169] To move from a contractual regime to one that treats a party as a trustee for its trading partner,

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point though is that in justice as fairness the parties do not know their conception of the good and cannot estimate their utility in the ordinary sense." J. RAWLS, A THEORY OF JUSTICE 155 (1971). Commercial parties in a capitalist system who presumably seek to maximize profit or some other measure of utility do not suffer from these disabilities. Of course, failure to impose sharing may be argued to be a characteristic of the existing commercial system that indicates a need for total overhaul. If that is the argument, however, the rules governing commercial impracticability are the least of the proponent's problems.

166. *See* M. SANDEL, LIBERALISM AND THE LIMITS OF JUSTICE 105-13 (1982) ("From the standpoint of autonomy, a contract's moral force derives from the fact of its voluntary agreement; when I enter freely into an argument, I am bound by its terms, whatever they may be.").

167. *See supra* notes 114-15 and accompanying text.

168. As one commentator has recently distinguished the two categories:

> No party to a contract has a general obligation to take care of the other, and neither has the right to be taken care of. . . .
>
> . . . .
>
> In contrast to contract . . . relations, in which both parties seek to satisfy their own needs and desires through the relation, fiduciary relations are designed not to satisfy both parties' needs, but only those of the entrustor.

Frankel, *Fiduciary Law*, 71 CALIF. L. REV. 795, 800-01 (1983). Professor Tamar Frankel perceives an expansion of relations that fall within the fiduciary category. The obligation of adjustment to satisfy a trading partner would seem to confirm her perception.

169. Jacobson, *The Private Use of Public Authority: Sovereignty and Associations in the Common Law*, 29 BUFF. L. REV. 599, 615-29 (1980).

therefore, is to restructure the contractual understanding and to replace the individual expression inherent in negotiated contract with a regime that invites judicial intervention to restructure the bargain in the name of saving the parties from their own ignorance.

Once the use of contract as a means of individual expression is recognized, the implications of imposing the relational model become more clear. Assume, for instance, that the quite reasonable motivation for the long-term contract between Printer and Supplier was to gamble about subsequent prices of paper. Printer might have guessed that prices were about to increase, so that locking itself into a long-term contract price that would subsequently be less than spot market prices would be to its advantage. That same advantage, however, would necessarily be to Supplier's detriment. Supplier may have guessed just the opposite. If the transaction was a gamble, an obligation to adjust when the risk that was the subject of the gamble materializes frustrates the very reason for the transaction.[170]

The parties need not begin from diametrically opposed assumptions—and the contract need not be zero-sum—in order to view the agreement as a rational outcome of individual expression. For example, the parties may roughly agree on the probability of an intervening event, or on the decisional criteria by which to determine the probability of the event, but differ significantly in their reactions to that information. They may have different levels of risk aversion or of confidence[171] in a

170. Professor Oliver Williamson has recently investigated the impracticability doctrine from a transaction-cost perspective. He has identified three potential disabilities of a regime that strictly enforces bargains: gambling incentives, information disparities, and unintended cost escalation. Professor Williamson questions whether the game of commerce should be available for gambling, since players may be using other parties' resources. The argument above suggests that gambling may advance individual expression and social welfare, subject to the discussion below concerning third party effects. *See infra* notes 207-15 and accompanying text. Professor Williamson's concern for information disparities centers on the possibility that commercially able but contractually unsophisticated firms may face disincentives if confronted with strict enforcement. Although able firms may suffer information disparities, avenues of compensation other than adjustment do exist. For instance, such firms could and should seek legal advisors who represent more established firms and who are aware of contractual practices that reflect the knowledge of those firms. Williamson himself is somewhat skeptical of the ability of adjustment to reduce contracting costs related to avoidance of unintended cost escalation. *See* Williamson, Assessing Contract (forthcoming) (copy on file with the author).

171. For example, a party may lack confidence due to a belief that insufficient information exists to choose among several reasonable outcomes of a

particular assignment of probabilities.[172] A commercial actor who displays a high level of risk aversion or lacks confidence in any definite assignment of probabilities may well bargain for some loss-sharing arrangement or other relationship that creates fiduciary responsibilities. Its trading partner, however, may feel more comfortable with the same assignment of probabilities, and thus be willing to structure the transaction in a manner that eschews any obligation to behave in an altruistic manner. Presumably, if these parties were to bargain with each other at all, they would do so in a manner that accommodates their different positions. Once they reach an accommodation, it seems inappropriate to impose on them a structure for dealing with uncertainty different from the one to which they agreed. The deliberative process that gives an actor confidence or doubt about the future, the possibility of bargaining for some advantage, and the option of making educated guesses or taking uninformed but voluntary long shots seems to underlie not only the pursual of self-interest fostered by the commercial system[173] but also the use of contract as a medium for defining the scope of voluntary relationships rather than having them defined by state-imposed risk-allocation devices. An agreement that reflects that process defines in large part the parties' very reasons for entering a commercial transaction, and imposing on the parties a different allocation defeats those reasons and correspondingly limits the autonomy of commercial actors to strike their own bargains. This is not to say that commercial parties would never share losses. Several of the strategies mentioned above implicitly require some sacrifice of independence to avoid the risk of bearing the entire loss. That, however, may be all that parties "behind the veil" would agree on: a principle of freedom of contract that permits commercial actors to bind each other to a specific allocation under uncertainty, including but not limited to one that requires adjustment.

If the law were to go further and create obligations of adjustment, it would alter the concept of contract even beyond what advocates of adjustment appear to recognize. Although those who espouse relational contracts apply the theory primarily in situations where it is necessary to rescue a trading partner from financial disadvantage, the "quasi-fiduciary" and

course of action or because a variety of choices still exist after "unreasonable" possibilities have been dismissed.

172. *See* Ellsberg, *supra* note 38, at 660-63.

173. *See supra* note 32 and accompanying text.

"partnership" language implies much more. Assume the following facts:

> Luckout purchases all his widgets from Leech at a market price, pursuant to a ten-year requirements contract. Their contract contains no express clause joining the corporate interests of the parties. Widgets have numerous uses, though Luckout needs them only as a component in his new Gadget. The Gadget becomes an instant success, leaving Luckout with immense wealth. Leech cannot raise his price for widgets, because the alternative uses for them (other than in Luckout's Gadgets) are less profitable and users would be unwilling to pay more than current prices for them. Leech makes a claim for a share of Luckout's profits on the theory that they represent assets of the "partnership" created by the long-term arrangement.

As one commentator states, "the sharing of profits and losses is fundamental to the notion of partnership."[174] Yet it would seem odd to honor Leech's claim in light of the separate identities of the actors and the limited scope of their contractual arrangement. Nonetheless, the application of partnership or fiduciary principles, expressly invoked by those who endorse a "relational" construct for long-term transactions, suggests just that. If Leech would be required to adjust should a disruptive event render the contract disadvantageous to Luckout, those principles would seem to create a parallel claim in favor of Leech when Luckout achieves unanticipated success, even though the intervening event causes no direct harm to Leech.[175]

An alternative but related theory of why the law should not presume that parties silent on the issue desire adjustment emerges from Frank Knight's theory of profit among entrepreneurs.[176] For Knight, uncertainty inheres in the definition of profit, which is earned by those who exercise the best judgment over a range of business decisions. Each decision is made in the face of various uncertainties; actors that have or fear lower rates of success may confront uncertainty through some kind of relational mechanism, whereas those who have the ability and confidence to capitalize on higher rates of success reap larger

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174. Harrison, *supra* note 115, at 592; *see id.* at 594 ("Partnership law and contract law are both designed to foster the sharing of a jointly created surplus.") For a case involving one commercial actor's assertion that another actor could not discontinue a line of its business because a discontinuance would disrupt their relationship, see Fiber Indus. v. Salem Carpet Mills, Inc., 315 S.E.2d 735 (N.C. Ct. App. 1984).

175. Macneil has defined relational contracts in terms of sharing "benefits and burdens" of the relation. *See* Macneil, *Restatement, supra* note 103, at 595.

176. *See* F. KNIGHT, *supra* note 36.

rewards for their effort.[177] Knight asserts that entrepreneurial reaction to uncertainty explains, and advances, social progress; minimizing obstacles to such risk taking, such as forced adjustment of contractual terms, is in society's best interest.

The relational model, in sum, demonstrates both the desirability and the possibility of cooperative efforts between commercial actors. Inability to foretell the future may induce the actors to adopt a mutually beneficial process for resolution of any event that disrupts their initial expectations. The model does not, however, compel the imposition of any duty to adjust once that event has intervened. If the parties have reached an ex ante agreement concerning the possibility that uncertainty will affect the relationship, the allocation implicit in that agreement suggests that the actor who initially suffers the loss either bargained poorly or took a calculated risk that the cost of "insuring" through cooperation was too high. Neither situation warrants imposition of ex post adjustment.

B. The Desert Argument

Some commentators support adjustment of the original bargain after a disruptive event by claiming that the disadvantaged party does not "deserve" the loss and the party benefitted does not "deserve" the gain.[178] This view implicitly accepts a premise challenged in the previous section, namely, that the parties are unable to deal with the event that precipitates the call for adjustment at the negotiation stage. Commercial actors who, through purposive action, accept a recognized risk or rationally determine not to consider the possibility that a certain contingency might arise would be difficult to describe as "undeserving" of any burden suffered when that contingency arises.[179] Adjustment proponents may argue, however, that the conditions under which an actor assumes a risk may so impair its judgment that the assumption ought not to be accorded legal significance.[180] The next sections try to demonstrate that, even given the possibility of impaired judgment, the concept of de-

177. *Id.* at 264-90.

178. *See* Speidel, *Supply Contracts, supra* note 10, at 405-06 (nothing that "the [undeserved] losses can be described as 'unfair' and the gains as 'unjust' "); Schwartz, *supra* note 60, at 8-11.

179. Nor do they "deserve" assistance in extricating themselves from the situation they created, although it might be generous to help them out. *See* J. Feinberg, *Justice and Personal Desert*, in Doing and Deserving 75 (1970).

180. This argument is put forth to suggest the propriety of cooling-off periods in Kronman, *supra* note 20, at 786-97.

sert does not require creation of a legal duty to adjust long-term contracts.

1. "Purchase and Sale" Desert

In an article published in 1976, Professor Alan Schwartz embraced the idea of desert as a basis for excusing parties from performance of contracts made unprofitable by inflation.[181] For Schwartz, desert takes on the aura of a purchase and sale agreement. An "undeserved loss" is a "loss resulting from the materializing of a risk a party was not paid to bear, or a gain a party bought the right to enjoy but which a court prevented him from realizing by excusing the other party."[182] Similarly, "undeserved gain" is rooted in the understood bargain of the parties: "An 'undeserved' gain means a gain a party did not buy the right to enjoy or a loss resulting from a risk a party was paid to bear but which a court shifted to his contract partner."[183]

Schwartz's definition appears properly to preclude some assignments of rights that would not commonly be spoken of as deserved.[184] Nevertheless, given Schwartz's stated purpose of using "desert" to invoke "widely acceptable values,"[185] his view of the relationship between desert and bargain appears anoma-

181. Schwartz, *supra* note 60. Professor Schwartz ultimately rejected the desert case for excuse for fear that uneven judicial administration of the consequent rule would undermine contract stability. *Id.* at 11-19; *see also* Dawson, *Judicial Revision of Frustrated Contracts: The United States,* 64 B.U.L. REV. 1, 35-38 (1984) (noting that parties have same advantage of hindsight as judge and more expertise in subject matter of contract). Nevertheless, Professor Schwartz's initial impression of the desert case as "appealing" and his resort to "widely acceptable values," Schwartz, *supra* note 60, at 8, suggests that he would endorse excuse if the administrative difficulties could be resolved.

Although Schwartz limited his analysis to excuse, rejecting loss splitting on the similar basis of judicial inability to accurately measure the value loss of individual parties, *see id.* at 8 n.20, Professor Speidel subsequently picked up the banner and applied Schwartz's analysis to the adjustment remedy. Speidel, *supra* note 10. For convenience, references will be only to "Schwartz's argument," although the analysis applies to both authors' arguments.

182. Schwartz, *supra* note 60, at 8.

183. *Id.*

184. For instance, the fruits of gratuitous acts, not governed by contract and unrelated to the recipient's conduct, such as a gift from an admiring aunt to a newborn niece, would not likely be referred to in terms of desert. In addition, the requirement that payment be made for gains received precludes desert claims to resources obtained through "luck." For instance, a person who finds a twenty-dollar bill on the sidewalk would not be said to "deserve" the money.

185. *See* Schwartz, *supra* note 60, at 8.

lous in excluding cases where one party produces a benefit for which no one has been paid but where a desert claim to the benefit appears appropriate. To see why this is so, consider one of Schwartz's examples:

> The seller, *S*, is a dealer [in corn, which he must purchase shortly before delivery to his buyer]; the buyer, *B*, [is] a wholesaler. The contract price is $1.20 per bushel. When the contract is made, the price to dealers like *S*—the price at elevators—is $1.00 a bushel; the price to retailers—the price at which *B* expects to resell—is $1.50. The parties assume that corn selling at $1.00 may fluctuate through a range bounded by $.82 on the low side and $1.18 on the high side (i.e., ±$.18). They know the risk of these fluctuations is fully reflected in the current prices dealers charge. This knowledge necessarily implies an expectation by *B* that *S* will deliver for $1.20 if the price at elevators goes to $1.18, although if *S* breached he could resell at $1.38. An unanticipated 50 percent inflation occurs, raising the price at elevators to $1.50; from dealers like *S* to buyers like *B* to $1.80; and from wholesalers like *B* to retailers to $2.25. *S* breaches, buys the corn at $1.50, and resells to another at $1.80; *B* covers at $1.80 and resells at $2.25.[186]

Schwartz concludes that if *S* were to be excused from performance, he would be able to avoid a risk, a rise to $1.38, that he was compensated to take. His saving, therefore, includes an "undeserved gain." Similarly, *B* would have lost part of the gain that he had purchased the right to enjoy, an "undeserved loss." Since excuse produces undeserved losses and gains, allocation of loss by desert might seem to require that *S*'s obligation be enforced. If the contract were enforced, however, *B* will receive an "undeserved gain;" he will be able to purchase corn at the old contract price and sell at the new market price, yielding him a profit greater than the one he purchased the right to enjoy in his contract with *S*. Schwartz implicitly recognizes this state of affairs, for he states that enforcement would create undeserved gains and losses that would exceed undeserved gains and losses produced by excuse. On the basis of that comparison, Schwartz concludes that excuse would provide a superior outcome in this situation.[187]

Schwartz may be right that in some cases excuse will minimize societal dislocations due to unanticipated events, but this is no desert argument. A desert argument would excuse or not excuse *S* because he would receive what he deserves under one outcome and would not receive what he deserves under the other. Schwartz argues instead that both excuse and enforce-

186. *Id.* at 9.
187. *See id.* at 10.

ment produce undeserved gains and losses but that one should be favored over the other because its result minimizes the undeserved gains or losses. At bottom, therefore, Schwartz's argument is an argument that identifies desert with cost minimization.[188] To say that the loss in these cases ought to be allocated in a manner that reduces societal cost is perfectly acceptable.[189] Such an argument is consistent with both a utilitarian allocation of entitlements and an allocation that seeks to minimize the number of morally bad outcomes in the world.[190] Nevertheless, couching that result, rooted as it is in public interest, in terms of what the parties "deserve" becomes both unnecessary and misleading.

Schwartz's confusion of desert as a principle of bargaining with desert as a principle of ethics makes his definition depart from his self-proclaimed standard of "widely acceptable values." Desert as a principle of bargaining excludes cases in which gains from trade would generally be considered to be deserved even though the other party received no commensurate payment. Assume, for instance, the following:

> Omniscient, through diligent, painstaking, and expensive research, determines that a volcanic eruption in the Pacific Northwest will soon occur and destroy sufficient timber in the area to increase appreciably the price of lumber. He therefore enters into a requirements contract with Dunce whereby the latter, who suspects nothing of the impending eruption, agrees to supply all of Omniscient's lumber requirements over the next five years at today's prices plus an annual increase calculated on the basis of the historical rate of inflation in lumber prices over the previous five years. The historical rate does not reflect price fluctuations that are due to large decreases in the supply of timber. The eruption occurs and Omniscient's price predictions prove accurate.[191]

Applying Schwartz's rubic, Omniscient's gain appears undeserved. Omniscient certainly did not "buy the right to enjoy that gain" in the usual sense because he gave Dunce nothing in return. Omniscient could argue that he bought the right to the gain in the sense of having forgone opportunities to engage in

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188. *Cf.* Daniels, *Merit and Meritocracy,* 7 PHIL. & PUB. AFF. 206, 210 (1978) (relating notions of merit and desert to goal of maximum productivity). Although it might be possible to construct an argument that cost minimization *equals* desert, Schwartz's appeal to "widely acceptable values" seems to preclude such a strained definition.

189. *See* Posner & Rosenfield, *supra* note 63, at 90.

190. *See* J. FEINBERG, *supra* note 179, at 81. (arguing that "the seller *deserves* to be excused because doing so is consistent with the public interest").

191. This hypothetical is a modified version of RESTATEMENT (SECOND) OF CONTRACTS § 161, illustration 10 (1979); *see also* Kronman, *Contract Law and Distributive Justice,* 89 YALE L.J. 472, 489-91 (1980).

other profitable activities to pursue his research into volcanic activity.[192] Schwartz's symmetrical treatment of undeserved gain and undeserved loss, however, implies that payment to the gainer should exactly offset payment to the loser, that is, that payments be direct transfers between the parties. Thus, even if Omniscient did pay for his gain in the broader sense, Dunce's loss is surely "undeserved" in that it resulted from the "materialization of a risk [he] was not paid to bear." Using Schwartz's analysis, Dunce sold at a price that reflected a willingness to bear "standard price-affecting risks,"[193] which might cause price fluctuations within an acceptable range, but which did not reflect any expectation, and hence any willingness, to bear the risk of a significant escalation of the value of the lumber.[194]

2. "Individual Efforts" Desert

The conclusion that Omniscient does not deserve his gain seems anomalous in light of the "widely acceptable values" to which Schwartz appeals. Other, more widely shared conceptions of desert would readily reward Omniscient's conduct. Professor Feinberg's acclaimed analysis contends that desert claims differ from claims of entitlement, eligibility, or qualification in that one deserves a resource "*in virtue* of some possessed characteristic or prior activity" that relates to the claimant.[195] Desert claims are not predicated simply on satisfaction of conditions laid down by rules or minimal qualifications, nor do they derive from the consequences generated by the activity, such as the promotion of general welfare. Instead, the bases of desert are features about the claimant as an individual that are tied to the resources claimed.[196]

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192. Omniscient's investment of personal resources to determine the likelihood of eruption may be more concrete evidence of a "purchase."

193. *See* Schwartz, *supra* note 60, at 9.

194. Professor Schwartz's article anticipated the case of Omniscient and Dunce by suggesting that "the desert case would be nondirective" where the parties' expectations about the future are "asymmetric." *See id.* at 13 n.30. If desert is predicated on individual effort, however, then desert arguments would be expected to arise only where one party obtained information that gave rise to an idiosyncratic and thus asymmetric expectation about the future. Schwartz's exception thus appears to swallow the rule. If, on the other hand, the parties' expectations are symmetric, the most that can be said is that, as Schwartz says, a court will have an easier time determining whether an actual price fluctuation deviated from the parties' expectations sufficiently to permit excuse. This argument for administrative convenience, however, seems to have little to do with notions of desert.

195. J. FEINBERG, *supra* note 179, at 58-59 (emphasis in original).

196. So defined, the theory of desert reflects Professor Robert Nozick's un-

Thus understood, Omniscient appears to deserve his gain from the contract. He has not simply jumped through the legalistic hoops of offer and acceptance that entitle him to enforce his contract, nor has he "lucked into" a good deal. He has not actively deceived, misled,[197] or coerced Dunce into the transaction nor, presumably, taken undue advantage of Dunce's need to sell before Dunce had an opportunity to obtain equal information.[198] Omniscient has instead exploited his own abilities to engage in research, made educated guesses, and negotiated effectively. This is not to say that Dunce deserves his loss. Unlike Schwartz's conception of desert, Feinberg's does not require that a deserved gain of one party offset a deserved loss of another.[199]

Schwartz and Feinberg would agree that neither the gainer nor the loser following a truly "unforeseen" event deserves its position.[200] To the extent that advocates of adjustment believe that ultimate distribution of resources depends on desert,[201] however, neither Schwartz nor Feinberg could maintain that the party adversely affected *deserves* adjustment.[202] Absent the

derstanding that one deserves the products produced by the use of one's assets that have not been illegitimately obtained, *see* R. NOZICK, ANARCHY, STATE AND UTOPIA 224-26 (1974), Professor J.R. Lucas's statement that what one deserves depends on one's deeds, *see* J. LUCAS, ON JUSTICE 164-65, 197, 200 (1980), and Professor Lloyd L. Weinreb's recent formulation that desert explanations refer to some anterior event for which the deserving person is responsible, *see* Weinreb, *The Complete Idea of Justice*, 51 U. CHI. L. REV. 752, 765 (1984).

197. *See* RESTATEMENT (SECOND) OF CONTRACTS § 161 (1979).

198. *See* Eisenberg, *The Bargain Principle and Its Limits*, 95 HARV. L. REV. 741, 763-73 (1982).

199. Feinberg describes such desert claims as "nonpolar." J. FEINBERG, *supra* note 179, at 62.

200. If the event is truly unforeseen, the actors who confront gain or loss precipitated by the event cannot, in Feinberg's terms, be said to deserve their changes in position because the actors did nothing to cause the event. *See supra* notes 195-96 and accompanying text. Similarly, in Schwartz's terms, the actors have not "bought the rights" to the gain or loss. *See supra* notes 181-83 and accompanying text.

201. This is certainly not Feinberg's position, as he concludes that his exposition "should be sufficient to lay to rest the philosophical myths that desert is a single factor to be weighed against other . . . considerations in ethical decisionmaking and that it represents uniquely the claim of justice." J. FEINBERG, *supra* note 179, at 79. Lucas reaches the same conclusion. *See* J. Lucas, *supra* note 196, at 207. Professor John Rawls wholly rejects the use of desert as a distributive principle. *See* J. RAWLS, A THEORY OF JUSTICE 313 (1971). Others do not wholly reject desert but recognize that desert claims are subordinate to other claims. *See* T. NAGEL, *The Policy of Preference*, in MORTAL QUESTIONS 97 (1979).

202. This is a different claim than one that asserts that the party who gains

requisite payment, adjustment would constitute undeserved gain for the disadvantaged party under Schwartz's model. Using Feinberg's analysis, the same assumption of ignorance that triggers the aggrieved party's claim for adjustment undermines its claim to *deserve* adjustment. If the party's position is "fortuitous," its claim has nothing to do with its abilities or prior performance, so no desert basis for its adjustment claim exists.[203] Gains and losses in this situation may be undeserved, but so is any adjustment remedy.[204]

If the assumption of unforeseeability is relaxed and the analysis returns to the decision-making model of bounded rationality, the concept of desert predicated on individual effort seems to *support* the nonadjustment model.[205] The bounded-rationality model assumes actors engage in a rational decision-making process that satisfies their concerns for subsequent intervening events, despite their inability to make precise probabilistic calculations. Thus, an actor who has rationally determined to exclude a specific risk, or not to consider further the possibility of an intervening event, is not simply an innocent victim of circumstances. On the contrary, such an actor has acted with as much foresight as it desires and has adapted to uncertainty by applying appropriate principles of decision-making. An actor that has reasoned that additional investments in discovery and consideration of risks are not worth the effort seems to deserve the consequences of that decision. If, after rational calculations, that actor determines not to further consider potential adverse effects of the contract or not to strike a bargain that maximizes its position should such an event occur, it has little basis for complaint about the bargain when those effects appear. The other party may or may not "deserve" the gain of receiving performance under the original

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from the event deserves to compensate the loser. Feinberg indicates that this latter claim does not necessarily follow from a desert claim to compensation: "Compensation for harm which is no assignable person's fault is, however, a different matter [from desert of reparation for wrongful injury]. The unemployed may deserve compensation for their loss, but it is not necessarily true that there is someone who deserves to be held liable for it." *See* J. FEINBERG, *supra* note 179, at 75.

203. *See* Speidel, *Supply Contracts, supra* note 10, at 406 n.163.

204. The disadvantaged party may predicate its demand on some other norm, such as societal benefit. *See supra* notes 188-90 and accompanying text. The point here is simply that the disadvantaged party cannot claim it *deserves* adjustment.

205. Absent the requisite payment to the other party, Schwartz would probably still denominate any gain following an intervening event as "undeserved." *See supra* notes 185-87 and accompanying text.

contract terms.[206] Nothing the gaining party has done, however, suggests that it deserves to be required to compensate the disadvantaged party. The disadvantaged party's "deserved" loss is enough to preclude any desert claim it has to sharing the loss. Indeed, if the advantaged party chose a particular transactional structure in order to be in a superior position should such an event intervene, any gain it achieves seems deserved. The individual efforts desert argument, therefore, militates against adjustment far more than it shares the paternalistic view in favor of adjustment.

III. THIRD PARTY EFFECTS AND THE DUTY TO ADJUST

To this point, the argument against adjustment has relied on an assumption that contracts between commercial actors create minimal externalities.[207] In some contexts, that assumption must be relaxed before ultimately embracing nonadjustment. In the case of a long-term supply contract, if an event not expressly provided for in the agreement occurs that renders the contract far less beneficial than anticipated for one of the parties, requiring performance may impose significant costs on nonparties. Performance of the contract might render performance of other contracts by the disadvantaged party with external parties significantly more costly or might be so financially destructive to the disadvantaged party that its employees, creditors, or those who otherwise depend on its economic vitality (for example, suppliers or other businesses in a "one-company" town that revolves around the disadvantaged party) also suffer. What ought to be done?

Broadly defined, third parties include anyone not a signatory to the contract at issue. Not all such third parties, however, should be considered equal for purposes of determining whether a disruptive event justifies adjustment. The extent to which the bargaining model developed above applies to nonparties may vary with their relationship with the disadvantaged party or with their ability to protect themselves from the intervening event. For example, if a fuel supplier has a contract to sell fuel at a constant price when energy costs are increasing rapidly, enforcement of the contract will leave the fuel supplier less able to pay debt service on loans and wages to employees.

206. If the intervening act did not threaten to disadvantage the other party, the party may not have considered the risk at all.

207. *See supra* text accompanying notes 25-27.

From the perspective of the fuel supply contract that caused the difficulty, both the supplier's commercial creditors and its employees are third parties. Both creditors and employees, moreover, may have anticipated a long-term relationship with the disadvantaged party when their relationships began. Thus, the relationships between these third parties and the disadvantaged party exhibit some of the same characteristics as the relationship between the disadvantaged fuel supplier and the advantaged party. Enforcement of the fuel supply contract might therefore simply be viewed as an event disruptive to the disadvantaged supplier's contracts with its creditors and employees. Where the loss should fall in these circumstances could then be determined by reference to the same analysis of risk allocation under uncertainty that was applied to enforce the fuel contract.

There may, however, be reasons to treat the creditors and the employees differently. If employees bargain with the disadvantaged party individually rather than through a collective body, they may be so susceptible to heuristic errors in deciding terms of employment and have so little access to risk information that can be efficiently gathered and analyzed that they are more analogous to the discrete than the relational paradigm.[208] Further, in non-collective-bargaining contexts, the employee may have insufficient bargaining power to structure the relationship in a manner to provide for risk sharing. Thus, employees may not exercise sufficient commercial rationality to place on them unhesitatingly any loss that accrues by operation of the bargain. Moreover, employees may not readily perceive employment decisions as risk-taking enterprises. On the contrary, acceptance of employment can be construed as a risk-reducing mechanism by which employees place their labor in the hands of those who they consider better able than themselves to deal with the uncertainties of the future.[209] Consequently, applying the risk allocation under uncertainty analysis developed above to an individual employment contract may be inappropriate.

The commercial creditor, on the other hand, is largely in the business of taking risks. It extended or could have extended credit on terms that reflected a degree of risk arrived at

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208. *See supra* text accompanying notes 114-16; *supra* notes 168-69 and accompanying text.

209. *See* F. KNIGHT, *supra* note 36, at 264-312; A. POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS 52-53 (1983).

after deliberation of information considered relevant and worth obtaining.[210] The creditor's conscious risk taking and the availability of devices to minimize risks, such as monitoring the cash flow and requiring approval of long-term contracts of the debtor, parallel the capacities of the immediate parties to the contract; the argument against adjustment, therefore, appears to apply equally to the commercial creditor and to the parties.

Even the protection of the most sympathetic third parties affected by enforcement of the contract, those that exercised little or no control over the consequences of the event that generated the claim for excuse,[211] would not necessarily justify judicial intervention to adjust contractual obligations. If the advantaged party has rationally bargained to be in a position to profit, or at least not to lose, when disruptive events materialize, why that party must surrender its advantage is unclear. A utilitarian calculus might suggest that intervention is appropriate because it permits third parties to gain more than the advantaged party loses. Even accepting a utilitarian norm, however, judicial intervention would be appropriate only if no other form of compensation to disdvantaged parties generates greater net benefits. Some commentators have argued that enforcement of a duty to adjust when net benefits between the immediate parties to the contract would be produced would present issues of measurement not readily susceptible to judicial resolution.[212] These difficulties increase geometrically if a court is attempting not only to revise a contract between the parties but also to structure the transaction in a manner that considers the needs of nonparties who are probably not before the court.[213]

Even if these administrative difficulties could be overcome, a utilitarian calculus would require comparison between judicial adjustment and other means of assisting third parties. Some of these alternatives could leave the advantages of the contract intact while requiring a broader base of persons to

210. *See* A. SCHWARTZ & R. SCOTT, *supra* note 20, at 514-25 (discussing secured financing and various factors lenders consider when making short-term loans).

211. Obvious examples are family members related to an employee laid off as a result of contract enforcement. *See* Farber, *supra* note 95, at 337.

212. *See* Dawson, *supra* note 181, at 35-38; Schwartz, *supra* note 60, at 6-8.

213. *Cf.* Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 STAN. L. REV. 387, 398-400 (1981) (criticising the "liberal" law-and-economics approach to contracts on the ground that, when third-party effects are considered, any result can be justifed).

compensate for harm caused by the disruptive event. Such alternatives might include welfare payments to compensate for the adverse effects of nonadjustment or public taking, with compensation, of the contract rights of the advantaged party.[214]

None of this means that externalities are irrelevant to the desirability of adjustment. There may be cases in which disruptive events have consequences of such magnitude that some sacrifice of individual benefit is warranted. The inflation in post-World War I Germany is the textbook example.[215] Short of such extreme situations, however, courts seem poorly suited to balance an advantaged party's benefits from enforcement against nonparties' costs and even less well suited to determine the best mechanism for resolving the consequences of an event with broad societal effects.

IV. CONCLUSION

When entering a long-term contract, commercial actors make several decisions about the future. Subsequent events will frequently lead them to regret their choices. The manner in which we frame the law to respond to this issue says a great deal about our view of contract and rationality. The more we view contract as a communitarian exercise, and the less we credit individuals with the capacity to consider and deal with the future, the more we are willing paternalistically to just relationships following a postcontract event. This Article adopts a different approach. The ability of commercial actors to develop strategies for dealing with uncertainty, strategies that permit but do not require sharing, suggests a more individualistic view of contract and a broader view of what constitutes rational commercial behavior. My belief that moral notions such as desert do not justify an obligation to adjust also leads me to conclude that we must respect bargains struck through individual negotiation. The issue is not whether individuals will suffer harsh results from such a legal rule; on occasion, they will. The issue is whether we can do better by acting through the law rather than through a sense of moral obligation by those who act within the structure created by the legal rules. For the reasons discussed, I conclude that we cannot.

214. The Supreme Court endorsed takings of contract rights to serve public purposes in United States Trust Co. v. New Jersey, 431 U.S. 1, 19 n.16 (1977).

215. *See* Dawson, *Judicial Revision of Frustrated Contracts: Germany*, 63 B.U.L. REV. 1039 (1983); Dawson, *The Effects of Inflation on Private Contracts: Germany, 1914-1924*, 33 MICH. L. REV. 171 (1935).