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Contract Law and Modern Economic Theory

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As generations of law professors have realized, Contracts is an ideal course for the Socratic method. The fundamental questions addressed in the course are easy to understand: Why enforce contracts? Why not enforce promises of gifts? Why limit freedom of contract? Yet, as many first-year students have discovered, the answers to these fundamental questions are surprisingly elusive. Despite the pleasures of the Socratic dialogue, ultimately the Contracts teacher also is apt to become frustrated; the Socratic admission of ignorance seems a bit inadequate as a final conclusion. Like Plato, many Contracts teachers wish to find some more positive answers, a desire all the more understandable because the questions are so much more mundane than those that plague philosophers.[1]

In their search for answers to these questions, many scholars recently have turned to economic theory.[2] This Article differs somewhat from previous ventures in this vein. Generally, scholars previously have borrowed particular techniques (such as the use of indifference curves)[3] or concepts (such as transaction costs)[4] from the field of economics and applied them in an *ad hoc* manner to a single legal prob-

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1 *See, e.g.*, 1 F. COPLESTON, A HISTORY OF PHILOSOPHY 98-108 (1963).

2 A 1979 bibliography lists 160 articles in this genre. C. VELJANOVSKI, BIBLIOGRAPHY IN LAW & ECONOMICS (1979) (Centre for Socio-Legal Studies, Wolfson College, Oxford) (on file with the author). For a collection of recent work, see THE ECONOMICS OF CONTRACT LAW (A. Kronman & R. Posner eds. 1979).

3 Birmingham, *Damage Measures and Economic Rationality: The Geometry of Contract Law*, 1969 DUKE L.J. 49; Goetz & Scott, *Liquidated Damages, Penalties and the Just Compensation Principle: Some Notes on an Enforcement Model and a Theory of Efficient Breach*, 77 COLUM. L. REV. 554 (1977).

4 *See, e.g.*, R. POSNER, ECONOMIC ANALYSIS OF LAW ch. 4 (2d ed. 1977); Posner & Rosenfield, *Impossibility and Related Doctrines in Contract Law: An Economic Analysis*, 6 J. LEGAL

lem.[5] This Article, on the other hand, will attempt to examine links between contract law and some important models of the economy as a whole. No attempt will be made to explain the fine detail of contract law. Instead, the Article will focus on basic doctrines such as consideration and freedom of contract.

Perhaps the most basic feature of contracts is that, unlike barter transactions, they involve exchanges over time. Consequently, understanding contract law requires an examination of the reasons for enforcing promises to take future actions. The Article begins with a critique of a recent economic analysis of this problem.[6] The essential weakness in that analysis is its attempt to examine the issue in isolation from more general economic theory. In order to develop a more satisfactory analysis, the Article then will discuss in some detail the standard neoclassical microeconomic model.[7] As will be shown, justifications for enforcing promises flow quite naturally from certain features of this model. These features, however, may be unfamiliar to many readers, because they are generally covered only in advanced courses in microeconomic theory. The discussion will draw on some relatively sophisticated aspects of general equilibrium theory that have not been easily available to legal readers in the past.[8] The treatment, however, will be primarily nonmathematical[9] and should be understandable to readers with a minimal knowledge of economics.

The Article then will explore the implications for contract law of this standard neoclassical model. The neoclassical model provides strong justifications for many aspects of classical contract law, such as enforcement of executory contracts,[10] refusal to enforce promises to make gifts,[11] and protection of the expectation interest in awarding

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STUD. 83 (1977); Priest, *Breach and Remedy for the Tender of Nonconforming Goods Under the Uniform Commercial Code: An Economic Approach*, 91 HARV. L. REV. 960 (1978).

[5] *E.g.*, Goetz & Scott, *Enforcing Promises: An Examination of the Basis of Contract* (pt. 2), 89 YALE L.J. 1261 (1980); Kronman, *Specific Performance*, 45 U. CHI. L. REV. 351 (1978); Leff, *Injury, Ignorance and Spite—The Dynamics of Coercive Collection*, 80 YALE L.J. 1 (1970). Often, these scholars have emphasized the costs and limitations inherent in the legal system itself.

[6] *See infra* text accompanying notes 17-37.

[7] *See infra* text accompanying notes 38-74.

[8] *See infra* text accompanying notes 53-73.

[9] This is true with the exception of a brief criticism of a damage formula proposed by some writers. *See infra* text accompanying notes 17-37.

[10] An executory contract is an exchange of promises that the parties have not yet started to perform. Such contracts are enforceable. RESTATEMENT (SECOND) OF CONTRACTS § 75 (1981); 1 A. CORBIN, CONTRACTS § 142 (1963).

[11] A promise to make a gift generally is not enforceable. It is not a contract, since it does not involve an exchange. *See* RESTATEMENT (SECOND) OF CONTRACTS § 71 (1981); A. CORBIN, *supra* note 10, § 114. If, however, the promisee was harmed by reasonably relying on the promise and if the promisor should have anticipated the possibility of this reliance, then the promise (although still not a contract) will be enforced at least to the extent necessary to avoid injustice. RESTATEMENT (SECOND) OF CONTRACTS § 90(1). Although reliance-based recovery has received a great

damages for breach.

The microeconomic theory discussed in the first part of the Article provides an intellectually elegant treatment of a large number of economic and legal problems. This intellectual elegance is purchased, however, at the cost of considerable oversimplification. Important aspects of the real world simply find no place in the model. Economic theorists have devoted a great deal of attention in recent years to developing more realistic models.

Consequently, the Article next addresses the implications of these recent attempts to improve upon the neoclassical model. A large literature has developed concerning the effects of imperfect information and transaction costs on economic institutions.[12] Looking outside their own field, some important economic theorists also have begun to consider the economic implications of modern research in psychology.[13]

These newer models point toward justifications for some important rules of contract law such as various restrictions on freedom of contract. From a neoclassical economic perspective, most restrictions on freedom of contract make very little sense. Given the assumptions of the neoclassical model, this is hardly surprising. The model assumes that individuals have perfect information, that they are completely rational, and that there are no impediments to entering into transactions.[14] It would be surprising if such superhumans were *not* able to manage their own affairs without the intervention of the government. In the newer models, however, individuals are assumed to have imperfect information, to possess limited rationality, and to encounter substantial transaction costs. The result is that individuals' ability to order their affairs through voluntary arrangements such as private contract is limited and government intervention through the courts is justified. After examining the newer models in some detail, the Article then discusses the economic basis of two specific common law restrictions on freedom of contract.[15] One rule prohibits penalty clauses; the other limits enforcement of personal-injury disclaimers. The newer microeconomic models provide support for these rules.

The Article concludes with a tentative attempt at a broader theory of the limits on freedom of contract. It will suggest that various legal rules fit together to form a safety net protecting against catastrophic losses. Complementing the general principle of freedom of contract is an opposing principle of mandatory loss sharing, a kind of compulsory insurance. If individuals were able to engage in perfect planning, this

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deal of attention from scholars, its practical significance seems to be limited. *See* Goetz & Scott, *supra* note 5, at 1302-09.

12 *See infra* text accompanying notes 107-14.

13 *See infra* note 134.

14 *See infra* note 40 and accompanying text.

15 *See infra* text accompanying notes 124-62.

safety net probably would not be justified. Limited rationality, imperfect information, and transaction costs, however, limit the ability of individuals to plan for the future. As a result, individuals face unexpected, unpleasant surprises that they are unable to protect against by contract. The safety net provides protection against such surprises for individuals and, consequently, for society.

The trend in this century has been towards greater government intervention in the marketplace. Recently, however, a sharp reversal in this trend has taken place. This reversal in policy often has been justified on the basis of economic theory.[16] This Article should demonstrate that contemporary economic theory and *laissez faire* need not be synonymous.

CONTRACT LAW AND THE NEOCLASSICAL MODEL

The Goetz & Scott Theory of Contract

In a recent article, Professors Goetz and Scott have attempted to provide a unified theory of contract law.[17] Although their article is of considerable interest in its own right, it also provides a good illustration of some of the pitfalls of attempting *ad hoc* economic explanations of legal rules outside the context of a general economic theory.

Goetz and Scott view promises as signals of future conduct.[18] These signals allow promisees to increase their present consumption, knowing that they will receive increased wealth in the future. Goetz and Scott call this "beneficial reliance."[19] These signals also can be misleading, for a promise later may be broken, leaving the promisee worse off than before the promise was made. Goetz and Scott call this "detrimental reliance."[20] In their view, "perhaps the principal social rationale of promising"[21] is to produce beneficial reliance.

Because promises convey both benefits and possible harm, Goetz and Scott draw an analogy between promises and potentially defective consumer goods.[22] They then argue that the harm done by "defective" promises should be made a cost of promising, just as tort liability makes the harm caused by defective goods a cost of production. Goetz and Scott argue that awarding damages based only on detrimental reliance would deter the making of valuable promises by failing to give promisors credit for producing valuable beneficial reliance.[23] Based on

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16 This recent phenomenon is associated with the University of Chicago Economics Department and, to a lesser extent, with its Law School.

17 Goetz & Scott, *supra* note 5.

18 *Id.* at 1264.

19 *Id.* at 1267.

20 *Id.*

21 *Id.* at 1269.

22 *Id.* at 1275.

23 *Id.* at 1281-83.

this argument, they derive the following damages rule:

$$D = R - [p \div (1 - p)]B.^{24}$$

In this equation, D stands for damages, R stands for detrimental reliance, B stands for beneficial reliance, and p stands for the "promisor's reasonable, subjective assessment of the probability that he will perform a promise under an existing legal rule calling for damages D in the event of breach."[25]

Goetz and Scott apply this formula both to contracts and to other kinds of promises. As applied to contracts, they argue, the formula can be simplified. Because the promisee could have entered into an alternative contract, detrimental reliance equals the performance value of the alternative contract. In a well-functioning market, the performance value of the alternative contract should equal that of the breached contract. Hence, R is approximately equal to E, the full-performance expectation. Similarly, the beneficial reliance attributable to any given contract is small, because the promisee could have obtained the same benefit from alternative contracts. Hence, B is approximately equal to zero. The formula given above then simplifies to D = E. "[T]hus," Goetz and Scott conclude, "expectation damages are a good proxy for the prospective net reliance damage formulation developed above."[26]

This analysis assumes that maximizing the welfare of the two parties to the contract is socially desirable. That assumption, however, need not be true. For example, when one of the parties decides to perform on her contract because of the threat of damages, she diverts resources from other possible uses, thereby possibly injuring third parties. Without applying the more sophisticated economic analysis discussed below,[27] one cannot assume that benefits to the original parties resulting from performance of the contract will exceed the harm done to these third parties. Thus, in order to justify their assertion that contract enforcement is desirable, Goetz and Scott need the help of more general economic theories. As the Article will show later, however, these theories themselves require that contracts be enforceable, thus obviating the need for the Goetz & Scott theory.[28] In short, the Goetz & Scott theory justifies contract enforcement only when combined with other theories that are quite capable of justifying contract enforcement on their own.

Another weakness in the Goetz & Scott theory is its narrow view

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[24] *Id.* at 1282.

[25] *Id.* at 1281.

[26] *Id.* at 1284.

[27] *See infra* text accompanying notes 38-50. Effects on third parties can be ignored in the standard neoclassical model unless they take place outside the price system. Goetz and Scott, however, do not rely explicitly on this theorem of the neoclassical model, and, as shown later, the validity of this theorem itself depends upon the existence of enforceable contracts.

[28] *See infra* text accompanying notes 54-72.

of the benefits of contract. Recall that, according to Goetz and Scott, the primary benefit of promising is that it allows optimal allocation of resources between present and future consumption.[29] Their damages formula is intended to provide an incentive for promisors to give useful signals, in order to enable the promisee to increase present consumption. Contracts, however, actually perform far more important functions than the allocation of present and future consumption. Insurance contracts and contracts for future delivery of goods are important examples of contracts serving other functions.[30]

A related problem is that the Goetz & Scott damages formula is really only an equilibrium condition. The "formula" gives D as a function of p, B, and R. Damage awards, however, will affect p, the probability of performance.[31] The probability of performance, in turn, affects the reliance measures, B and R, since promisees presumably rely more heavily as performance becomes more likely. Consequently, rather than being a formula for finding the optimum D, the equation really describes an equilibrium relationship between B, R, p, and D.[32] Multiple equilibria may well exist, but Goetz and Scott do not explain how to choose among them.

An example may help to clarify this point. Consider a society of individuals who are risk-averse and therefore would like to purchase insurance.[33] Assume that in this society, all of the insurance companies issue what purport to be unconditional contracts, but the insurance companies intend to perform only one percent of the time.[34] Now, consider the application in this context of the Goetz & Scott damage formula ($D = R - [p \div (1 - p)]B$). R, the detrimental reliance, is very small. By entering into one insurance contract, a consumer has forgone other possible insurance contracts, but those alternative contracts

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29 *See supra* text accompanying note 21.

30 *See infra* text accompanying notes 60-63.

31 Goetz and Scott acknowledge this in passing. *See* Goetz & Scott, *supra* note 5, at 1270 n.26.

32 A similar problem is posed by Goetz and Scott's treatment of good faith. If a promisor makes a promise with *no* intention of performing, Goetz and Scott consider the promise to be made in bad faith and would award full expectation damages. *Id.* at 1287. Suppose, however, that the promisor would perform if threatened with such damages. Then the promise is no longer made in bad faith. Hence, D changes. Given the new level of D, the promisor again may decide never to perform. The promisor then is in bad faith, and D changes again. No equilibrium value of D may exist.

33 A risk-averse individual prefers a certain loss to a lottery that involves a loss of uncertain magnitude but the same expected value as the certain loss. For instance, a risk-averse individual would be willing to pay more than $100 to avoid a lottery situation involving a 90% probability of zero loss and a 10% probability of a $1,000 loss. Thus, the individual would be willing to pay an insurance premium over $100 in exchange for the insurance company's promise to reimburse any $1,000 losses that occur. *See* K. ARROW, ESSAYS IN THE THEORY OF RISK-BEARING ch. 3 (1971); R. POSNER, *supra* note 4, at 75-76.

34 Since p is not equal to zero, Goetz and Scott apparently would not consider this to be bad faith. Goetz & Scott, *supra* note 5, at 1287. *See supra* note 32.

would have been just as worthless as the actual contract. Thus, the benefits forgone by entering into this particular contract are themselves very small. The second term of the formula can be ignored because p is so close to zero.[35] Clearly, D will be quite small. The small amount of damages gives no incentive for the insurance companies to adhere more closely to their contracts.

This result, however, is not economically desirable. Consumers would prefer protection for the face amount of the policy but are unable to obtain such protection through any one policy because of insufficient legal enforcement.[36] On the other hand, as Goetz and Scott point out, in a competitive market their formula is also satisfied when D = E,[37] where E represents the expectation interest (in this case, the face amount of the policy). Under these new conditions, breach would

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[35] Furthermore, B, the beneficial reliance, is probably small also. Consumers probably will not rely on promises that they know are so unlikely to be kept.

[36] A risk-averse consumer would not be able to obtain coverage equally satisfactory to her by purchasing a policy with a face amount one hundred times the value of the loss she is insuring against. If she bought such a policy, the expected value of her compensation should the loss occur would equal the value of the loss. This expected value, however, would be the sum of a 99% probability of zero compensation and a 1% chance of compensation equal to one hundred times the loss. This would be inferior, from the risk-averse consumer's perspective, to a policy that provided a 100% probability of exactly covering the loss. Faced with only a 1% chance that the insurance company will adhere to its contract, a risk-averse consumer would need a policy with a face amount well in excess of one hundred times the loss to make her indifferent between that policy and one that covers the loss with certainty. The expected value of the policy with a 1% chance of performance would have to exceed the expected value of one with certain performance. This larger expected value would translate actuarially into a larger insurance premium. Thus, the consumer would have to pay more to get equivalent coverage and might rationally choose to underinsure.

The consumer also could attempt to adjust to a 1% probability of performance by purchasing one hundred policies, each having a face value equal to the loss against which the consumer wants to insure. Here again, however, a risk-averse consumer would prefer to have the loss covered with certainty; therefore, she would need more than one hundred policies with a 1% probability of performance in order to be equally satisfied with her coverage. Buying more than one hundred policies would result in coverage with a larger expected value and therefore would require larger total premiums for coverage than if the consumer could buy insurance with certain performance. The consumer thus would pay more for equivalent coverage or would underinsure.

Professors Kahneman and Tversky, whose work on prospect theory is discussed later in this Article, *see infra* text accompanying notes 135-43, compare the desirability of what they call probabilistic insurance with that of insurance providing certain coverage. In experiments, they found that consumers preferred probabilistic insurance over insurance offering certain coverage. Kahneman & Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 ECONOMETRICA 263, 269-70 (1979). As the authors note, this finding conflicts with what expected utility theory predicts. *Id.* at 270. The author's expected utility analysis is not relevant to the probabilistic insurance under discussion here for two reasons. First, the consumer in their example gets a refund of the premium if the insurance does not cover the loss; this increases the relative desirability of their probabilistic insurance. Second, their consumer is indifferent between certain coverage and no coverage at all, while the consumer under discussion here prefers the certain coverage. *See supra* text accompanying note 33.

[37] *See* Goetz & Scott, *supra* note 5, at 1284.

no longer profit the insurance company, and p would rise from .01 to 1. Thus, the Goetz & Scott formula gives different levels of damages to correspond with different levels of p, the probability of performance. Goetz and Scott fail to provide any basis for setting p.

In short, the Goetz & Scott theory is incomplete in two respects. First, it assumes that optimizing the welfare of the two parties to the contract will optimize social welfare. This assumption can only be justified in the context of a more powerful economic theory. Second, their damages formula requires a prior choice of the optimal level of contract performance. This choice also requires a more general theory of the function of contracts in the economy. As the next section will demonstrate, a more satisfactory account of the economics of contract can be derived from modern welfare economics.

Neoclassical Welfare Economics and Contract Law

The two fundamental theorems of neoclassical welfare economics provide the theoretical basis for assertions that the free market is economically efficient.[38] The two theorems assert that, given certain assumptions, a free market will possess equilibria having certain desirable qualities.[39] The crucial question here is the extent to which the existence of enforceable contracts is necessary to obtain these equilibria. In order to answer that question, however, an explanation of the fundamental theorems is necessary.

Assuming that trades between parties are both voluntary and are made with full knowledge,[40] every trade logically must be to the benefit of both parties. Even if every trade benefits both parties, however, the cumulative effect of these trades conceivably might not be beneficial. Both real life and game theory present numerous situations in which individually rational choices lead to social catastrophe.[41] Furthermore,

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[38] A market that is economically efficient allocates each resource to its highest-valued use (as measured by willingness to pay). In a society with an efficient market, for instance, each parcel of land is used for the purpose that maximizes the value of its output and each worker works in the type of employment that maximizes the value of what she produces. One way to understand heuristically why a free market might be thought capable of achieving this result is to realize that in a free market resources are sold to the highest bidder. Producers in different industries and within the same industries bid against each other for resources. The producer to whom a particular resource is worth the most because of its contribution to final output will be willing to bid the most for that resource. *See* E. BROWNING & J. BROWNING, PUBLIC FINANCE AND THE PRICE SYSTEM 7-10 (1979); R. POSNER, *supra* note 4, at 10-12.

[39] As explained in more detail later, *see infra* notes 44-49, the desirable qualities are that equilibria are economically efficient and that they span the range of possible wealth allocations.

[40] *See* C. FERGUSON & J. GOULD, MICROECONOMIC THEORY 12, 224-25 (4th ed. 1975).

[41] For instance, game theory has developed the well-known Prisoners Dilemma model. Assume that two individuals have robbed a bank and are questioned separately by the district attorney. The district attorney does not have enough evidence to convict them of bank robbery but does have enough evidence to convict them of a lesser offense. He tells each prisoner that if only one confesses and testifies against the other, the one who confesses will go free while the one

even if trades are beneficial, government intervention might produce even better results than trade among individuals. As the following discussion will explain in more detail, the two fundamental theorems of neoclassical economics preclude the possibility that society as a whole might not benefit by individually rational choices and the possibility that government intervention might create even better results than unimpeded exchanges.

The easiest economic model to understand involves a pure exchange economy. In such an economy, goods are not produced but are simply given to individuals as part of their initial endowment. Goods can change hands only by voluntary exchange. This model places a number of technical restrictions on the nature of the goods and individual preferences, but these restrictions limit the applicability of the model only slightly.[42] The critical question is whether individuals could exchange their way into an equilibrium state—that is, a state in which

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convicted will serve a long sentence for bank robbery. If neither confesses, they both will be prosecuted for the lesser offense. If both confess, they will receive sentences longer than those they would receive for the lesser offense but shorter than sentences given to nonconfessing convicted bank robbers. For each prisoner, the individually rational choice is to confess regardless of what the other prisoner does. If the other prisoner confesses, his partner had better confess in order to receive the more lenient sentence given to confessing bank robbers. If the other prisoner does not confess, his partner, by confessing, can go free rather than be punished for the lesser offense. If both prisoners pursue their individual well-being, both will confess. These individually rational decisions, however, do not achieve the best possible result for both, since both would be better off if neither confessed. Since the circumstances prevent their entering into an enforceable agreement not to confess, they will achieve that mutually preferable outcome only if they trust each other enough not to confess. That outcome is inherently unstable since if one trusts the other not to confess, the other can confess and go free. For expositions and applications of this model, see R. LUCE & H. RAIFFA, GAMES AND DECISIONS 94-97 (1957); F. SCHERER, INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE 160-64 (2d ed. 1980); Birmingham, *Legal and Moral Duty in Game Theory: Common Law Contract and Chinese Analogies*, 18 BUFFALO L. REV. 99, 103-10 (1969); Davis & Whinston, *The Economics of Urban Renewal*, 26 LAW & CONTEMP. PROBS. 105, 107-12 (1961).

This model captures the key elements of some social problems. For instance, improvements in the appearance of one landlord's property may allow higher rents for that landlord and also higher rents for landlords of neighboring properties. If the cost of improving landlord A's property exceeds the present value of the resulting higher future rents on A's property, then A has no incentive to improve her property even if the cost is less than the sum of the present value of resulting higher future rents on A's property plus those resulting on neighboring properties. The result of the individually rational behavior of not improving property, however, is not the best outcome, since all landlords would prefer the outcome in which all improve their property. The high cost of agreeing to and enforcing a contract to improve their properties may prevent that outcome. *See* Davis & Whinston, *supra*. Many environmental problems can be subjected to a similar analysis.

The Prisoner's Dilemma also captures the essence of the arms race. Both Russia and the United States may prefer mutual reductions in strategic weapons; but in the absence of mutual trust or an enforceable agreement, both countries find it individually "rational" to continue the arms race. F. SCHERER, *supra*, at 41.

[42] For a discussion of the necessary restrictions on characteristics of goods, see W. HILDEBRAND & A. KIRMAN, INTRODUCTION TO EQUILIBRUM ANALYSIS 36-37 (1976). For restrictions

no one has any incentive to engage in any further trades. General equilibrium theory leads to the important conclusion that such an equilibrium does indeed exist. This equilibrium can be described by a set of prices at which, for each good, the quantities supplied and the quantities demanded are equal.[43]

The fundamental theorems of welfare economics describe some important characteristics of this competitive equilibrium state. The first fundamental theorem of welfare economics asserts that, given certain assumptions, the competitive equilibrium is Pareto-optimal. A state of affairs is Pareto-optimal when any one individual's welfare can be improved only at someone else's expense.[44] Thus, the first theorem asserts that a competitive equilibrium is economically efficient.[45]

The problem with using Pareto-optimality as a normative guide is that infinitely many Pareto-optimal states may exist, each corresponding with a different initial endowment of goods.[46] For example, a state in which one individual owns all the goods is Pareto-optimal because no other individual can be helped without decreasing the welfare of this individual.[47] Hence, calling a state Pareto-optimal or economically efficient is not necessarily much of an endorsement for that state, even if it is economically efficient. One might well ask whether competitive

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on the nature of preferences, see K. ARROW & F. HAHN, GENERAL COMPETITIVE ANALYSIS 19-22 (1971).

[43] It is not necessary to consider in any detail the mathematical proof that an equilibrium exists, but some knowledge of the form of proof is useful in understanding the limitations of the conclusion. Essentially, the proof proceeds as follows: For any set of relative prices of the goods, we identify those goods that are in excess demand. Goods are in excess demand if buyers wish to purchase more of such goods at the current price than sellers are willing to supply. We then construct a function that increases the relative price of those goods that are in excess demand. Intuition tells us that such a process ultimately would lead to elimination of excess demand and hence to a balance between supply and demand. This result is proved mathematically by demonstrating that the adjustment process has a fixed point—a set of prices at which adjustment no longer occurs. Since the adjustment process changes the relative prices whenever there is excess demand, no excess demand exists at the fixed point. Therefore, the fixed point represents an equilibrium. Mathematically, the existence of a fixed point is demonstrated by using any one of several theorems from topology.

It is very important to note that the existence of such a fixed point does not mean that if the economy begins with some other set of prices, the adjustment process ultimately will lead it to the equilibrium. The theorem says only that there exists a set of prices that, once obtained, would not be subject to further change. *See* K. ARROW & F. HAHN, *supra* note 42, at 25-29; J. QUIRK & R. SAPOSNIK, INTRODUCTION TO GENERAL EQUILIBRIUM THEORY AND WELFARE ECONOMICS 70-76 (1968); H. VARIAN, MICROECONOMIC ANALYSIS 138-44 (1978).

[44] J. HENDERSON & R. QUANDT, MICROECONOMIC ANALYSIS: A MATHEMATICAL APPROACH 286-87 (3d ed. 1980); J. HIRSHLEIFER, PRICE THEORY AND APPLICATIONS 524 (2d ed. 1980).

[45] J. HENDERSON & R. QUANDT, *supra* note 44, at 292-93; J. QUIRK & R. SAPOSNIK, *supra* note 43, at 124-40; H. VARIAN, *supra* note 43, at 145-47.

[46] J. HENDERSON & R. QUANDT, *supra* note 44, at 312; J. QUIRK & R. SAPOSNIK, *supra* note 43, at 146; H. VARIAN, *supra* note 43, at 147.

[47] This assumes the absence of satiation. In other words, it assumes that the individual in question always prefers having more of a good and is never indifferent to the loss of goods.

equilibria restrict the range of possible distributions of wealth. For example, one might wonder whether individuals always have unequal incomes in a competitive equilibrium. If so, some forms of egalitarianism and the free market might be considered incompatible. The second fundamental theorem of welfare economics, however, asserts that no such incompatibility exists between egalitarianism and the free market. The second fundamental theorem asserts that, given any Pareto-optimal allocation of goods, a set of prices and initial endowments exists for which that allocation is an equilibrium.[48] This means that, through the political process, society can choose the Pareto-optimal allocation that corresponds to its preferences about the distribution of wealth. By rearranging individuals' initial endowments through an appropriate system of taxes and transfer payments,[49] the government could assure that a competitive equilibrium having the desired distributional characteristics would be reached.

Together, the two fundamental theorems make a strong case for the free market. The first theorem says that the free market will reach economically efficient results. The second theorem says that these results can be squared with society's preferences about the distribution of income without interfering with the competitive process; the government need only change the initial allocation of goods and then let the market go to work. To the extent that any rigorous, theoretical basis exists for economists' general preference for the free market, it is to be found in these two theorems.[50]

So far, the discussion has been concerned with pure exchange economies. Extending these theorems to economies in which production takes place is more complex and requires additional restrictive assumptions;[51] however, it introduces no fundamentally new concepts.

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48 J. QUIRK & R. SAPOSNIK, *supra* note 43, at 140-44; H. VARIAN, *supra* note 43, at 147-49.

49 These taxes and transfer payments must be "lump-sum," meaning that they must not depend upon the behavior of individuals or firms. If, for instance, a tax on consumption of some good were used to redistribute purchasing power, this tax would reduce efficiency by distorting consumer choices. Desire to purchase the taxed good would be too low and desire to purchase untaxed goods too high, as compared to true consumer preferences. In a simple economy with no production, in which consumers received their initial endowments as the Hebrews received *manna* from heaven, lump-sum taxes and transfer payments might be achieved by making them a function of individuals' initial endowments. If the economy were more complex—for instance, if it included production—lump-sum taxes and transfer payments would become more difficult. *See infra* note 51. For an introductory treatment, see P. SAMUELSON, ECONOMICS 593-603 (11th ed. 1980). The problem of how to combine individual preferences about income distribution into a social choice itself involves great difficulties.

50 J. HIRSHLEIFER, *supra* note 44, at 526-29; H. VARIAN, *supra* note 43, at 154-55.

51 *See* H. VARIAN, *supra* note 43, at 158-68. The second theorem's assumption of the availability of the necessary lump-sum taxes and transfer payments, *see supra* note 49, becomes more problematical when applied to a production economy. Assume that society desires to equalize economic welfare by transferring purchasing power from the rich to the poor. If the rich recognize that taxes depend on their income or wealth, they may choose to change the amount they earn (for

The same theorems hold true for the more realistic economy in which goods are produced as well as exchanged.

Nonetheless, some of the important limitations on these theorems should be noted. First, the equilibrium state may never actually be reached. A difficult analysis is required to determine whether equilibrium eventually will result if the economy begins in a state of disequilibrium.[52] Second, some of the assumptions underlying the theorems are clearly unrealistic. Not all markets are competitive. Many economic actors lack the perfect information postulated by the theory. Other assumptions less relevant to contract law also may fail. Third, these results are inherently keyed to general equilibrium analysis. In other words, they are keyed to the economy as a whole rather than to some individual market. If the assumptions fail for some sectors of the economy, free markets in other sectors may not be optimal.[53] Despite these limitations, many economists believe that the two theorems provide appropriate guidance for formulating social policy.

The discussion so far supports the desirability of a policy of free exchange. Contracts, however, involve future performances; the only transactions considered so far are cash sales or barter transactions. The forgoing model makes no reference to the passage of time and cannot describe agreements to make exchanges in the future. Extending the model to include future transactions, however, is quite straightforward. Only the definition of what constitutes a "good" needs some modification. Instead of defining goods as physical objects or services, a "good" is defined to be a contract right. More precisely, each good consists of the enforceable right to obtain delivery at a given date and place. The good also consists of specifications of the cost and of any conditions on the right to delivery. An example of such a good is the enforceable right to obtain from a certain individual an umbrella for $10 on July 4, 1983 if it rains on that day. Redefining the term "goods" does not af-

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instance, by decreasing their work hours). If the poor perceive their transfer payments to be inversely related to their labor income, they too may choose to work fewer hours. These alterations of time allocation would be inefficient, since they would reflect a relative valuation of produced goods and leisure time distorted by the taxes and transfer payments. It is hard to imagine an equalizing transfer system that does not make one's tax or transfer payment a function of one's income or wealth. *See* E. BROWNING & J. BROWNING, *supra* note 38, at 217-19, 315-17 (1979). Essentially, the tax would have to be imposed as a complete surprise on a one-shot basis.

[52] H. VARIAN, *supra* note 43, at 188-93.

[53] The theory of second best holds that if an economy does not attain efficiency in one market, it is not necessarily desirable for that economy to attain efficiency in all other markets. For instance, assume that an economy has just two sectors—one perfectly competitive and the other monopolistic. If the latter for some reason cannot be made competitive, the allocation of resources in the society as a whole may be improved by making the competitive industry less competitive. For a clear summary of the theory of second best, see F. SCHERER, *supra* note 41, at 24-29. In a large multimarket economy, inefficiency in one market may often be safely ignored in evaluating the efficiency of other, unrelated markets. J. HENDERSON & R. QUANDT, *supra* note 44, at 317.

fect the mathematical model, so the same fundamental theorems remain valid.[54] Hence, if individuals are allowed to trade freely in these enforceable contract rights, a Pareto-optimal equilibrium exists. Furthermore, as described earlier, the distributional aspects of the equilibrium can be manipulated simply by changing the initial endowment of goods. Thus, given the existence of enforceable contracts, the free market at least theoretically can attain economic efficiency.

Some penalty for breach of contract clearly is necessary in order to ensure economic efficiency. The individual who is paid to deliver an umbrella under certain future contingencies clearly would prefer to keep the money without ever delivering the umbrella.[55] Hence, some system of sanctions[56] must exist so that the purchaser of the right to future delivery actually receives the required umbrella or its equivalent.[57]

The discussion so far has indicated that, given the existence of a sufficiently broad range of enforceable contracts, certain economically desirable consequences will follow. The existence of such contracts conceivably might be a sufficient but not a necessary condition for the existence of Pareto-optimal equilibria. Suppose, for instance, that the creation of enforceable contracts for future performances were not allowed. Would an equilibrium still exist and, if so, would it be optimal?

Unless enforceable contracts are allowed, the economy will progress through a series of temporary equilibria on successive dates. That is, on any given day the quantities supplied and demanded for any given resource will be equal, but the equilibrium will shift over time.[58] For three reasons, such equilibria generally are not Pareto-optimal.[59]

The first reason relates to risk. Risk-averse individuals benefit from the existence of insurance contracts.[60] Such contracts by their nature must be contingent upon future events[61] and therefore require the existence of enforceable contracts.[62]

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54 H. VARIAN, *supra* note 43, at 175-76.

55 Sanctions also may be needed even if payment has not been made in advance. Consider an insurance company that bills at the end of the coverage period. If no sanctions exist, the profit-maximizing strategy for the company is to bill all customers who have not had losses and to make no payments to customers with losses. Of course, the customers' best strategy is not to pay the bills.

56 Conceivably, a society could have such a rigorous set of informal sanctions or could inculcate such strong ethical values that no legal sanctions would be required. In some unusual situations, breach might not be profitable for other reasons. For example, goods might have no market or use other than that for which they were contracted, and might be expensive to store or destroy.

57 For further discussion of the measure of damages, see *infra* text accompanying note 84.

58 K. ARROW & F. HAHN, *supra* note 42, at 49; Grandmont, *Temporary General Equilibrium Theory*, 45 ECONOMETRICA 535, 542 (1977).

59 H. VARIAN, *supra* note 43, at 178.

60 *See supra* note 33.

61 Such contracts also may be contingent upon current events not yet known to the parties.

62 Similar problems involving risks also may require the existence of capital markets in which

Second, some individuals may prefer to consume more than their current wealth; others may prefer lower consumption now in return for higher consumption later. Loan contracts are necessary to allow individuals to choose when to consume their wealth.[63]

The final reason why temporary equilibria are not Pareto-optimal relates to the problem of individual expectations. If the economy changes over time, individuals surely will not be ignorant of this fact. Presumably, they will attempt to make predictions about the future of the economy. The model therefore must be expanded to allow individuals to form expectations about future economic conditions. In other words, the model must account for the fact that individuals will enter into exchanges that reflect what they expect will happen to the economy in the future. These individual expectations, however, may well be inconsistent with what actually occurs in the future, because if all individuals act according to their own expectations, the future may turn out differently than any of them anticipated. Individual planning thus may be ineffective.[64] Hence, unless special assumptions are made about individual expectations, the market solution generally is not Pareto-optimal. Pareto-optimality potentially could be obtained by a government agency having complete control of the economy and thus more ability than individuals to make appropriate plans for the future.[65]

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individuals may trade portfolios of investments. Competitive capital markets allow an optimal allocation of risk while economizing on the need for state-contingent futures markets in commodities. If a consumer wants to guarantee that she will be able to buy a given consumption bundle at some future date, competitive securities markets can provide financial instruments with pay-out structures contingent upon changes in prices of the relevant goods and resources. Securities markets then can provide a form of insurance and allow money to reach its full potential for economizing on transaction costs. *See* K. ARROW, *supra* note 33, ch. 4.

63 *See* J. HENDERSON & R. QUANDT, *supra* note 44, at 326-33; J. HIRSHLEIFER, *supra* note 44, at 488-96; Samuelson, *An Exact Consumption-Loan Model of Interest with or without the Social Contrivance of Money*, 66 J. POL. ECON. 467 (1958).

64 Grandmont, *supra* note 58, at 542. In economics, prophecies are not necessarily self-fulfilling. For instance, if consumers expect electricity prices to remain at current levels, they may switch to electric cars. The resulting increased demand for electricity then may lead to the construction of new electric generating plants with costs, and therefore electricity prices, far in excess of current levels. Consumer planning thus will be ineffective, since consumers will not be able to consume the combinations of automobile travel and other goods and services upon which they had planned. They will have to reduce either their automobile travel or their consumption of other goods and services, or both. Many consumers will regret having bought electric cars. If only one individual had expected constant electricity prices and had bought an electric car, individual expectations would have been consistent with what actually happened in the future, since that one individual's increased electricity purchases would not have had an appreciable effect upon electricity prices. The general principle involved is called "the fallacy of composition." *See* P. SAMUELSON, *supra* note 49, at 11-12.

65 J. HIRSCHLEIFER, *supra* note 44, at 530-31; H. VARIAN, *supra* note 43, at 178; Polemarchakis, *Incomplete Markets, Price Regulation, and Welfare*, 69 AM. ECON. REV. 662 (1979). For instance, in the electricity example, *see supra* note 64, the government could improve upon the market result by regulating the number of electric cars purchased. At some number of

An example of the expectations problem is provided by the famous Cobweb Model. This Model describes the behavior of a market in which individuals make production plans based upon the output and prices of the preceding period. For example, wheat farmers may well decide, based upon the past year's high prices, to increase their production. As a result of the simultaneous decision of many farmers to increase production, the supply expands in the following year, forcing the price down and thus frustrating the expectations of the individual farmers. Each year, the market is brought into equilibrium by price changes necessary to balance supply and demand.[66]

Such a market is capable of behaving in a variety of different ways over time. Output may converge toward an ultimate equilibrium; the market may cycle through the same range of prices over successive time periods; or it may go through ever-increasing fluctuations. An equilibrium will exist in each given year.[67] The equilibria, however, will not correspond to the preferences of the individuals within the economy, who have no reason to desire these fluctuations of supply. If individuals are risk-averse, they will suffer a welfare loss even if, on the average, the level of production is optimal.[68] In such a situation, government intervention to stabilize supply potentially could increase consumer welfare.[69] This situation, therefore, is not Pareto-optimal.

On the other hand, if farmers not only sell their current output in a spot market but also can sell enforceable contracts for future delivery, a Pareto-optimal equilibrium can be reached. After a year of high prices, farmers initially may attempt to offer contracts for larger outputs in the succeeding year, but they will quickly find that these contracts outstrip demand at the anticipated higher price. This will lead them to change

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electric cars, the cost of using electric cars will equal the cost of using gasoline-engine cars. If consumers, or the government, have no other reasons than cost for preferring one fuel source to the other, this is the efficient number of electric cars for the government to allow. Since no consumer would then regret his choice of engine type, the result would be Pareto optimal. Whether in reality governments have better information or decisionmaking abilities than individuals is, of course, another question.

66 For graphical treatment and more detailed discussion of the Cobweb Model, see J. HENDERSON & R. QUANDT, *supra* note 44, at 166-69; P. SAMUELSON, *supra* note 49, at 381-83.

67 J. HENDERSON & R. QUANDT, *supra* note 44, at 167-69.

68 People who are risk-averse prefer a certain return to an uncertain return having the same expected value. *See supra* note 33. Hence, risk-averse consumers would prefer to have food prices fixed at the average level. Furthermore, if farmers are risk-averse, fluctuating prices, resulting in fluctuating returns, will be less desirable than certain prices if the prices average out over time; some may leave farming for some other business, thus reducing the food supply. This assumes that costless ways of insuring against these price changes do not exist. *See supra* note 62.

69 *See* P. SAMUELSON, *supra* note 49, at 399. For a related discussion of whether economic welfare is increased by cartels that adjust supply to stabilize price in reaction to demand fluctuations, see F. SCHERER, *supra* note 41, at 214-20. The discussion in the text is limited to the simplified Cobweb Model and is not meant to take any position on the complex problems of agricultural policy.

both their asking price and their output plans. Thus, the existence of a market for contracts for future delivery can compensate for imperfections in the process of forming expectations.[70]

In such a market, individuals may buy and sell options for future purchases. In some cases, the option may specify a price of zero for its exercise. Such an "option" is simply a contingent promise to make a future delivery. For example, a fire insurance contract may be viewed as the cash sale of an option to receive a specified amount of money if a house burns during a given time period. In a recent article, Professor Eisenberg has designated such agreements "half-completed-bargain promises."[71] Rather than paying cash, a buyer might exchange a contingent promise of his own for the seller's promise. Eisenberg argues that such wholly executory exchanges—exchanges of two future rights—have a lesser claim to enforcement than half-completed contracts.[72] Economically, however, the two kinds of contracts are equivalent. A purchase of a promise serves the same function of risk allocation whether the purchase is made with cash or on credit.[73]

Thus, the existence of a system of enforceable contracts is both necessary and sufficient to establish the conditions for an optimal competitive equilibrium. This provides a powerful theoretical basis for the enforcement of contracts. This basis for contract enforcement has the advantage over the Goetz & Scott theory discussed earlier[74] of being directly connected to some of the central concepts and results of modern economic theory.

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[70] The futures market reduces the price expected by farmers until it is consistent with the price that consumers are willing to pay. This consistency of expectations allows the long-run equilibrium price and quantity to be reached as quickly as possible. *See* Grandmont, *supra* note 58, at 544, 547.

[71] Eisenberg, *The Bargain Principle and its Limits*, 95 HARV. L. REV. 741, 743 (1982).

[72] *Id.* at 800-01.

[73] Suppose that only half-executed contracts were enforced. Would efficiency suffer? Not in a world without transaction costs. In such a world, someone wishing to make a purchase on credit of goods for future delivery could enter into a pair of transactions: (1) a loan to obtain the cash, and (2) a cash payment for goods with a later delivery date. In the real world, however, transfers of cash are not costless. For instance, positive interest rates and liquidity constraints create transaction costs. These transaction costs would be increased pointlessly by requiring exchanges to be made for spot cash in order to be fully enforceable. Generally speaking, individuals will structure the form of exchange and the medium of payment in order to minimize their transaction costs. A rule limiting their choices can only force them to use less efficient forms of exchange and more costly forms of payment. Just as individuals can set their own prices, they are also competent to decide whether an exchange should involve a credit card, an electronic funds transfer, cash, a check, a promissory note, a secured debt, or an ordinary unsecured debt. For a general discussion of the importance of a medium of exchange that optimizes transaction costs, see J. HIRSHLEIFER, *supra* note 44, ch. 8.

[74] *See supra* text accompanying notes 17-37.

Legal Implications of the Neoclassical Model

The neoclassical model provides guidelines for contract enforcement that neatly track the rules of "classical" contract law.[75] To begin with, the neoclassical model supports the enforcement of contracts for future performances as a means of attaining several economic goals: spreading or shifting risks,[76] optimizing choices between present and future consumption,[77] and eliminating disruptions caused by mistaken expectations.[78] Enforcement of contracts serves these functions even when exchanges are wholly executory.[79] Thus, the neoclassical model supports enforcement of all promises given in exchange for some consideration.

The doctrine of consideration bars enforcement of promises outside of the exchange context.[80] In particular, promises to make a gift are generally unenforceable. This rule is quite consistent with the neoclassical model. In order to account for gifts, the model can be modified to provide for interdependent utilities.[81] In the modified model, one person's utility (a measure of his satisfaction) can depend both upon his own level of consumption and upon that of some other

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75 The "classical" system of contract law is analyzed in G. GILMORE, THE DEATH OF CONTRACT (1974). Briefly, the classical system was the set of rules embodied in the First Restatement and propounded by Williston. *See* RESTATEMENT (FIRST) OF CONTRACTS (1932). It stressed the importance of clear rules concerning exchanges and tended to devalue more "equitable" concepts such as reliance and good faith that have become important in recent years.

76 *See supra* text accompanying notes 60-62.

77 *See supra* text accompanying note 63.

78 *See supra* text accompanying notes 64-70.

79 *See supra* text accompanying notes 71-73.

80 Consideration for a promise exists if the promisor made it in exchange for a bargained-for performance or promise by the other party. A promise made in the absence of consideration is, with some exceptions, not enforceable. RESTATEMENT (SECOND) OF CONTRACTS § 71 (1981); 1 A. CORBIN, *supra* note 10, §§ 109-124. One exception allows enforcement if the promisee reasonably and foreseeably relied on the promise. *See supra* note 11. A second group of exceptions arises out of the Uniform Commercial Code (UCC). The UCC altered the rule that a pre-existing duty cannot function as consideration for a new promise by allowing contract modification even if the modification seems to benefit or harm one party without an offsetting change in the other party's obligation. J. MURRAY, CONTRACTS §§ 88-89 (2d rev. ed. 1974); U.C.C. § 2-209(1). The UCC also permits a waiver of one party's right to sue the other for an alleged breach of contract, even if the waiving party receives nothing in exchange for the waiver. J. MURRAY, *supra*, § 89; U.C.C. § 1-107. In addition to these reliance and UCC exceptions to the requirement of consideration, some courts are willing to enforce a promise to perform a "moral obligation" without consideration. RESTATEMENT (SECOND) OF CONTRACTS §§ 82-86; J. MURRAY, *supra*, §§ 94-101.

81 The necessary modifications actually involve some significant complications. To begin with, interdependencies may or may not be Pareto-relevant. This means that at the competitive equilibrium there may be no possibilities for gifts that benefit both parties, even in the presence of interdependent utility functions. A may prefer that B not starve, but if B always chooses a non-starvation consumption bundle, then A's preference does not lead to any possible Pareto-improvement of the competitive equilibrium. Even if interdependence is still present at the competitive equilibrium, it may not be Pareto-relevant: A may want B to consume more, but not as strongly as A wants to increase his own consumption. *See* D. COLLARD, ALTRUISM AND ECONOMY 21

individual. This provides a motive for making gifts. The consideration doctrine requires that a gift be made in cash or present goods, rather than by giving the individual a right to a future performance.[82] In a frictionless market, however, no reason exists to make a gift in the form of a future right instead of giving the cash value of that right. Unlike exchanges of future rights, gifts of those rights serve no economic function in the neoclassical model. Hence, refusing to enforce them carries no economic cost.[83]

(1978); D. Johnson, The Fundamental Economics of the Charity Market 70 (1968) (Ph.D. diss., University of Virginia).

Further complications relate to the precise form of the interdependency. An interdependency is commodity-related if *A*'s utility depends upon the composition of *B*'s consumption bundle. If *A*'s utility depends upon *B*'s utility, the interdependency is utility-related. D. COLLARD, *supra*, at 7-8, 122-39. This distinction is crucial in evaluating the welfare economics of competitive equilibria in the presence of interdependencies.

The first theorem of welfare economics, which is that all competitive equilibria are Pareto-optimal, does not hold true in the presence of Pareto-relevant interdependencies of either type, but this results only from the definition of competitive equilibria. They are defined as including only the results of exchanges, therefore excluding gifts. For an excellent treatment of this point, see *id.* at 23-25. The first theorem is invalid then only because it does not take into account gifts of goods and services in the case of commodity-related interdependencies or wealth in the case of utility-related interdependencies. Collard shows that the first theorem does hold for "net competitive equilibria," which include the voluntary transfers needed to reach Pareto-optimality. *Id.* at 24.

The second theorem of welfare economics, which is that all Pareto optima are competitive equilibria, holds in the case of utility-related but not commodity-related interdependencies. For utility-related interdependence, the key idea is that any Pareto optimum can be arrived at through the competitive process if the process starts out from the appropriate initial distribution of wealth. Rader, *The Second Theorem of Welfare Economics When Utilities Are Interdependent*, 23 J. ECON. THEORY 420 (1980). The distribution of wealth can be reached through a mix of voluntary and involuntary lump-sum transfers. D. COLLARD, *supra*, at 25. The involuntary transfers are needed to avoid "free riders" when the redistribution is a "public good," benefiting not only donors but also others who have the same preferences. *Id.* at 30-35; E. BROWNING & J. BROWNING, *supra* note 38, at 186-88. For commodity-related interdependence, the second theorem does not hold because any attainable Pareto optimum cannot be a competitive equilibrium. Pareto optima in the face of commodity-related interdependence require that different individuals face different price ratios, since gifts involve subsidized prices to particular individuals. D. Johnson, *supra*, at 69-74. This violates one of the requirements for competitive equilibrium. F. SCHERER, *supra* note 41, at 597. In practice, it would be difficult to reach a Pareto optimum in the case of commodity-related interdependence because potential donors of the relevant commodities know that they cannot prevent the donees from converting the gifts to cash or from reducing the amount of the commodities that they otherwise would have purchased. *See* D. COLLARD, *supra*, at 125, 131; D. Johnson, *supra*, ch. 6.

82 An enforceable gift of future rights presumably could be sold to a third party for its present discounted value. If the donee does not sell the rights, they become an addition to the donee's portfolio of assets and immediately increase his wealth by their present discounted value. The donor's wealth is reduced by this same amount at the time of the gift, whether the donee sells the rights or not. In view of this result, the donor has no reason to avoid making the gift in the form of cash or some other already-existing asset. Perhaps the best way to see this point is to consider a gift of the donor's promissory note. Given perfect markets, such a note is worth no more to either the donor or the donee than its cash market value at the time of the gift.

83 Imperfect information and transaction costs provide possible rationales for gifts of future rights. For instance, if the donor is unsure of his longevity, he may be uncertain of the size of the

Besides supporting enforcement of contracts, the neoclassical model suggests a measure of damages. Consider the market for insurance. With fully enforceable contracts, an individual might choose to buy, for example, $100,000 of fire insurance. If damages for breach are any amount less than $100,000, a profit-maximizing insurance company would never pay on a policy. Of course, nonlegal motives for performance (such as morality) may exist. Thus, if ninety-nine percent of insurance companies perform anyway, the expected payout on a policy is $99,000, assuming that consumers cannot identify "honest" companies. The marginal consumer, however, is unwilling to pay the same premium for less coverage. Hence, premiums must fall. At the lower premium, honest companies cannot continue to offer the same level of coverage, so the level of coverage must fall. Now policies offer only ninety-nine percent coverage. The same process repeats. Consumers receive, on the average, less than ninety-nine percent coverage, since one percent of the companies breach. As a result, the coverage level sinks to roughly ninety-eight percent. In theory, this process could continue until the level of coverage reached zero. The conclusion is that if damages are less than the full-performance value of the contract, markets can collapse even if the vast majority of firms are trustworthy.[84] Hence, expectation-based damages are necessary.

Another classical contract doctrine receiving strong support from the neoclassical model is freedom of contract. In the neoclassical model, contracts represent rational attempts to maximize individual welfare. Intervening in market transactions can make some individuals better off only by injuring others. This is a necessary implication of the Pareto-optimality of market equilibrium. If the distribution of wealth is fair (by whatever criteria are used), tampering with the market will result in a shift away from the fair distribution. On the other hand, if wealth distribution is unfair, government taxes and transfer payments appear to be a more effective means of changing it than government intervention in market transactions.[85]

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gift that he wants to make. By delaying performance until his death, he can fashion a gift that is smaller in present value the longer his life turns out to be. As compared to an immediate gift, this type of gift functions partly as an annuity paid by the donee. It is not clear, however, that the donee is the most efficient bearer of the risk of the donor's longevity. A risk-averse donee would prefer that the donor give him the expected present discounted value of the future rights immediately and that the donor then purchase an annuity in the market. Transaction costs provide a possible explanation for gifts of future rights if, for instance, the donor's lack of liquidity makes a cash gift difficult. This implies that the donor cannot readily borrow against his assets or that the donee can borrow more readily against the enforceable gift of future rights. In spite of these possible rationales for gifts of future rights—imperfect information and transaction costs—the economic functions of gift promises seem much less significant than those of exchange promises.

84 This is an example of the "lemons" problem discussed *infra* text accompanying note 113.

85 *See* A. POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS 105-13 (1983). Part of the argument against using regulation to redistribute income is that the distributive effects are often perverse. For instance, minimum wage legislation may help high-wage union members at the

In short, the neoclassical model and the classical rules of contract law are highly consistent. This may be coincidence; it may be due to some tendency of the judicial process toward economic efficiency;[86] or it may derive from the common roots of the neoclassical model and the classical rules of contract law in nineteenth century liberalism.[87] As we shall see, post-neoclassical models have some rather different implications for the legal system than the neoclassical model.

BEYOND THE NEOCLASSICAL THEORY

Flaws in the Neoclassical Model

This Article has demonstrated the integral role played by contracts for future performances in the neoclassical theory that has dominated microeconomics in this century. This model not only explains the functions of contract, but also provides a powerful argument for freedom of contract. Under the basic neoclassical model, intervention in the market can never improve economic efficiency and is generally an inefficient means of pursuing other goals such as income redistribution. One of the achievements of the past thirty years has been to provide a rigorous mathematical basis for this position. At the same time that economists have been exploring the ramifications of the neoclassical theory, however, they also have begun to appreciate its limitations.

Several reasons exist for dissatisfaction with the neoclassical microeconomic model. To begin with, the model fails to address important aspects of economic reality, such as the dynamic processes of economic growth and technological change.[88] The failure to deal with economic growth is especially significant. Economic growth builds on prior growth, like compound interest, while an increase in static efficiency is a one-time gain. Thus, given sufficient time, even a small increase in economic growth can compensate for a decrease in static

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expense of black teenagers by preventing the latter from "buying" (by working at a low wage) the on-the-job training they need to compete with presently-employed workers. M. FRIEDMAN & R. FRIEDMAN, FREE TO CHOOSE 237-38 (1980). Similarly, housing code enforcement has been interpreted as a means of increasing the supply of middle-income housing by reducing the supply of low-income consumers. *See* R. POSNER, *supra* note 4, at 356-59.

For a philosophical argument in favor of using contract law to redistribute income, see Kronman, *Contract Law and Distributive Justice*, 89 YALE L.J. 472 (1980). Although Professor Kronman makes a number of valid points, he seems to overlook the troublesome possibility of perverse distributional effects.

86 The thesis that the judicial process does have an inherent tendency toward economic efficiency provides the foundation for a "positive" economic theory of law. *See* R. POSNER, *supra* note 4, at 17-19. For an introduction to the evolutionary theory supporting this thesis, see *id.* at 439-41; Epstein, *The Social Consequences of Common Law Rules*, 95 HARV. L. REV. 1717, 1743 n.88 (1982).

87 *See* P. ATIYAH, THE RISE AND FALL OF FREEDOM OF CONTRACT 398-409 (1979).

88 For a survey of the literature, see Nelson, *Research on Productivity Growth and Productivity Differences: Dead Ends and New Departures*, 19 J. ECON. LITERATURE 1029 (1981).

efficiency. Consequently, the value of the neoclassical model as a guide in setting social policy is diminished by the fact that the considerations for which the neoclassical model accounts are probably less significant than the dynamic considerations that the model overlooks.[89]

In addition to its failure to address some extremely important issues such as economic growth, the neoclassical microeconomic model has also been a disappointment empirically. Some of the major facts of economic life seem incompatible with the neoclassical model. For example, unemployment is impossible within the terms of the model. The model predicts that if employment falls below the desired level, unemployed workers will bid down the wages until they are low enough that the marginal worker will be indifferent between receiving the going wage and enjoying the "leisure" of unemployment. Thus, the only individuals who should be unemployed are those who preferred not to work at the going wage.[90] Although the Great Depression is the most striking empirical refutation of this prediction, the behavior of wages in more recent recessions has also been inconsistent with the predictions of neoclassical microeconomics. Wages in recessionary periods have stubbornly refused to fall as required by the theory.[91]

Empirical tests of other features of the neoclassical model also have been disappointing. According to the model, the prices firms charge for their goods should reflect their marginal cost of production. A wealth of empirical studies on this subject have failed to confirm this proposition. Typically, firms set prices based upon a mark-up over their average costs.[92] Furthermore, the marginal cost curves themselves do not have the U-shape so familiar to students of microeconomics.[93] Instead, a large number of studies have found either very shallow or flat marginal cost curves.[94] Indeed, considerable doubt exists whether firm managers even have the goal of maximizing profits that the theory postulates. From the manager's point of view, maximizing profits may

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89 *See* F. SCHERER, *supra* note 41, at 407; Nelson, *Assessing Private Enterprise: An Exegesis of Tangled Doctrine*, 12 BELL J. ECON. 93, 104 (1981). For example, the efficiency losses due to monopoly would be acceptable if, as Schumpeter suggested, monopoly led to more rapid technological innovation. J. SCHUMPETER, CAPITALISM, SOCIALISM, AND DEMOCRACY 88, 103 (1942). *See also* F. SCHERER, *supra* note 41, at 423-32.

90 *See* R. DORNBUSCH & S. FISCHER, MACROECONOMICS 364-65, 375-79 (2d ed. 1981); P. SAMUELSON, *supra* note 49, at 325-27; J. TOBIN, ASSET ACCUMULATION AND ECONOMIC ACTIVITY 34-37 (1980).

91 R. GORDON, MACROECONOMICS 166, 238-40 (2d ed. 1981); R. DORNBUSCH & S. FISCHER, *supra* note 90, at 380-81; J. TOBIN, *supra* note 90, at 2-3.

92 F. SCHERER, *supra* note 41, at 185-89; J. TOBIN, *supra* note 90, at 35.

93 A U-shaped curve means that the unit cost of producing goods falls until a certain volume of production is reached and then rises again once that volume is exceeded. For examples of U-shaped marginal cost curves, see J. HENDERSON & R. QUANDT, *supra* note 44, at 85; J. HIRSHLEIFER, *supra* note 44, at 305; P. SAMUELSON, *supra* note 49, at 428-29.

94 *See* E. MANSFIELD, MICROECONOMICS: THEORY AND APPLICATIONS 185-91 (abr. 3d ed. 1979)(summarizing numerous studies).

simply be one of several goals, including expanding the firm's size and maximizing her own salary and job security.[95] Numerous studies show that firm size itself is a product of a dynamic process called "random walk" rather than the kind of static equilibrium found in the neoclassical model.[96]

The empirical problems are not limited to the prices firms charge for their goods. Consumers also fail to behave as predicted by the theory. Although the neoclassical model makes very weak assumptions about the behavior of consumers under conditions of certainty, the model's assumptions about consumer choice between risky alternatives are more stringent.[97] The predicted results have not materialized. For example, one basic postulate of the model is transitivity. The model postulates that if an individual finds A equivalent to B, prefers B to C, and finds C equivalent to D, then that individual should prefer A to D.[98] In fact, experiments have failed to confirm this prediction. In these "preference reversal" experiments, the subjects are offered the choice between two gambles. The subjects are also asked to state the amount of money that each gamble is worth to them. Surprisingly, in many cases the subjects prefer to take gambles that have a lower cash equivalent than the gambles they reject. Despite strenuous efforts, economists have been unable to invalidate these results.[99]

Perhaps the most obvious flaw in the neoclassical model, however, is that its basic assumptions are incorrect. One critical assumption is that individuals have perfect information about the goods offered on the market and the prices of those goods. Thus, they know exactly what they are paying for and what alternative purchases would cost.[100] This is, on its face, a highly unrealistic assumption. The model also assumes that entering into contracts is costless.[101] In reality, transaction costs are significant. For example, common experience suggests that the cost of making and closing a house sale can approach ten percent of the purchase price of the house. Economists have attempted to modify these unrealistic assumptions of the neoclassical model. As shown in the next section, the modified theories provide new functions

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95 F. SCHERER, *supra* note 41, at 29-41.

96 *See id.* at 92-100, 146, 289-95.

97 J. HENDERSON & R. QUANDT, *supra* note 44, at 52-60.

98 *Id.* at 53.

99 *See* Grether & Plott, *Economic Theory of Choice and the Preference Reversal Phenomenon*, 69 AM. ECON. REV. 623 (1979). It is not necessary, however, to search the literature for esoteric psychological experiments to find instances of irrational behavior under conditions of uncertainty. For example, despite the well-documented benefits of seat belts in reducing the probability of death or serious injury from automobile accidents, less than 20% of the population uses them. Arnould & Grabowski, *Auto Safety Regulation: An Analysis of Market Failure*, 12 BELL J. ECON. 27, 27 (1981).

100 J. HENDERSON & R. QUANDT, *supra* note 44, at 136-37.

101 J. HIRSHLEIFER, *supra* note 44, at 234.

for contract, but they also may provide new justifications for limiting freedom of contract.

Recent Developments in Economic Theory

Attempts to perfect the neoclassical theory have focused on modifying the model's assumptions of zero transaction costs and perfect information. In the newer models, contracts can serve as a means of minimizing transaction costs or avoiding problems associated with imperfect information. The role of contract in these new models can be illustrated by the example of an individual who wishes to build a new house. In a world of perfect information and zero transaction costs, the individual might proceed as follows. Every hour of construction would be the subject of separate bidding by contractors. The contract for each hour would state the operations to be performed during that hour in such detail that the tasks would be entirely specified. Each time segment would be contracted to the firm making the lowest bid on that segment.

In the real world, of course, such a procedure would be impossible. Transaction costs make it infeasible to write the series of detailed contracts or to conduct the numerous auctions that this procedure would require.[102] Furthermore, the costs of monitoring the contractors' performance make it impractical to tie compensation to the precise physical tasks performed.[103] Obviously, the transaction costs of moving workers and materials on and off the job site on an hourly basis also would be prohibitive. Instead, the individuals would enter into contracts for the entire job with a single contractor, allowing that contractor to subcontract out parts of the work. Entering into a single contract economizes on transaction costs and reduces the individual's information requirements. Similar factors motivate firms to enter into long-term contractual relations.[104] Even when they use no formal legal contract, individuals and firms often may rely on informal, implicit con-

102 *See* Williamson, Wachter & Harris, *Understanding the Employment Relation: The Analysis of Idiosyncratic Exchange*, 6 BELL J. ECON. 250, 264-67 (1975); Williamson, *Transaction-Cost Economics: The Governance of Contractual Relations*, 22 J. LAW & ECON. 233 (1979).

103 Williamson, Wachter & Harris, *supra* note 102, at 262-64. The literature on principals and agents deals with the problem of achieving optimal incentive and risk-sharing when costs of monitoring performance are high. This approach is relevant to contracting between two parties when one party, the principal, provides an input that will have a productivity dependent upon some external variable (such as market conditions) and upon the inputs (usually called "effort") of the other party, the agent. The agent's effort cannot be fully specified in the contract and is often costly to monitor. The classic example is the employer who hires a worker to run a machine. The problem is to determine terms that will most efficiently allocate the market risks while leading to an optimal level of effort by the employee and minimizing the expense of supervision. *See* Harris & Raviv, *Some Results on Incentive Contracts with Applications to Education and Employment, Health Insurance, and Law Enforcement*, 68 AM. ECON. REV. 20 (1978); Shavell, *Risk Sharing and Incentives in the Principal and Agent Relationship*, 10 BELL J. ECON. 55 (1979).

104 *See* Goetz & Scott, *Principles of Relational Contracts*, 67 VA. L. REV. 1089 (1981); Macneil,

tracts to allocate risks, reduce transaction costs,[105] and to reduce the need to search for new partners.[106]

Most of the rigorous mathematical modeling in the last decade has focused on the problem of imperfect information rather than on the problem of transaction costs. In the past, the neoclassical model's assumption of perfect information often was considered unimportant. Recent work, however, has indicated that introducing information costs into the neoclassical model can drastically change the results that it predicts. In particular, consideration of information costs undermines the strong support for the principle of freedom of contract that the neoclassical model otherwise provides. The new models addressing the problem of imperfect information can be divided into two groups. The first group of models incorporates imperfect price information. The second group of models incorporates imperfect information about the quality of products.[107]

Imperfect information about prices can have drastic effects on the performance of markets. This is made clear by a model developed by Professor Diamond.[108] In this model, information about prices must be obtained through a costly search process.[109] The model assumes that all individuals have the same demand curve and have search costs greater than zero. It also assumes that all firms have identical cost curves. Given these assumptions, even if the search costs are extremely small and the number of firms is extremely large, the firms will not charge the competitive price. This is because each firm can profitably raise its price by an amount less than the search cost of the individual with the lowest search cost so long as the current price is below the price a monopolist would charge for the goods.[110] Raising the price by

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Economic Analysis of Contractual Relations: Its Shortfalls and the Need for a "Rich Classificatory Apparatus," 75 NW. U.L. REV. 1018, 1025-39 (1981).

105 The main reasons costs are reduced by using a general contractor are: (1) the general contractor has more expertise and can supervise more effectively, (2) because the contractor is frequently in the market, he can locate subcontractors with good work records more cheaply. Consequently, those subcontractors have an incentive to do good work in order to keep their good reputation and to get repeat business. This in turn reduces the need for detailed specifications and close supervision.

106 The late Professor Okun and others have argued that such implicit contracts characterize large segments of the economy. A. OKUN, PRICES & QUANTITIES: A MACROECONOMIC ANALYSIS 83-92, 138-48 (1981). *See also* R. GORDON, *supra* note 91, at 190-92, 243-44.

107 For an introductory survey of these models, see H. VARIAN, *supra* note 43, at 231-47.

108 Diamond, *A Model of Price Adjustment*, 3 J. ECON. THEORY 156 (1971). *See also* Scitovsky, *Ignorance as a Source of Oligopoly Power*, 40 AM. ECON. REV. 48, 50 (1950). For a summary, see Stiglitz, *Equilibrium in Product Markets with Imperfect Information*, 69 AM. ECON. REV. 339, 339-40 (1979).

109 It is easiest to think of this as the cost in time and effort of shopping among different stores.

110 The monopoly price is the price that a profit-maximizing firm would charge if it had no competition. For an explanation of how a monopolist sets this price, see F. SCHERER, *supra* note 41, at 14-16.

this amount will not induce any customer to search for another seller. Hence, all firms will raise their prices by small steps until they have reached the "monopoly" price, at which point further price increases are no longer profitable. If free entry into the market is possible, new firms will then enter to obtain this monopolistic profit until the monopolistic profit has been entirely dissipated. The result will be that firms will charge consumers monopoly prices but the firms will receive no higher profit than they would have received if consumers had perfect information in a freely competitive market.[111] In this model, a monopoly would be a Pareto improvement over free competition. A monopolist would charge the same price as the multitude of firms but at least the monopoly profits would not be dissipated by an excessive number of firms.

This model demonstrates that introducing even very small search costs can radically change the conclusions of the neoclassical model. Of course, the Diamond model is itself highly simplified. Economists have devoted a considerable amount of time to introducing more sophisticated assumptions concerning price search. These more sophisticated models lead to a variety of results. In some models, the equilibrium price returns to the competitive level; in other models, the equilibrium price is the monopoly price, a range of prices exist at equilibrium, or no equilibrium can be found.[112] The existence of search costs clearly does not make it impossible for the free market to reach a Pareto-optimal equilibrium, but, equally clearly, no reason exists for confidence that such a result will occur.

Imperfect information about product quality also can be inconsistent with Pareto-optimality. Consider the market for used 1978 Honda Civics. Assume that the cars in the best condition are worth $4,000, while those in the worst condition are worth nothing. Now, make two additional assumptions: (1) sellers know the value of their cars and will not sell at a price below that value; and (2) buyers cannot determine the condition of specific cars prior to sale but do know the average value of the cars on the market. Given these assumptions, the price for used cars must be zero and no sales will be made. The proof is simple. Suppose the price were $3,000. No car worth more than $3,000 would be offered for sale, but the owners of cars worth less than $3,000 would find it profitable to sell. Consequently, the average worth of cars on the market would be less than $3,000. Knowing this, buyers would be unwill-

111 The absence of supercompetitive profits often seems to be taken as an indication that markets are operating properly. *See, e.g.*, E. FARNSWORTH & W. YOUNG, CONTRACTS: CASES & MATERIALS 516 (3d ed. 1980); W. HAWKLAND & M. BENFIELD, SALES: CASES & MATERIALS 115-17 (1980). Actually, normal profit levels only indicate free entry.

112 For surveys of the literature, see Schwartz & Wilde, *Intervening in Markets on the Basis of Imperfect Information: A Legal & Economic Analysis*, 127 U. PA. L. REV. 630, 640-51 (1979); Stiglitz, *supra* note 108.

ing to pay $3,000. As a result, contrary to the assumption, $3,000 could not be the equilibrium price. The same argument applies to any possible equilibrium price above zero. This is Akerlof's famous "market for lemons."[113]

Of course, this is an extremely simplified model. Recent researchers have experimented with more sophisticated models in which buyers are assumed to use a variety of costly methods of ascertaining product quality, and sellers are given more complex characteristics. In general, markets no longer break down entirely under these more complex assumptions, but neither do they necessarily attain Pareto-optimal results.[114] At least in theory, then, government intervention in the marketplace appears to have a potential for increasing welfare when product information is costly.

These models also have significant implications for freedom of contract. The assurances provided by the two fundamental theorems of welfare economics[115] concerning the desirability of the free market do not appear to be justified under more realistic assumptions. Free markets may well be characterized by excessive prices, an excessive number of firms, or suboptimal product quality. Skepticism about the performance of the free market appears even more justified when one examines the economy as a whole rather than these models of particular markets. The attempts of individuals to adapt to a world of search costs and imperfect product information may optimize the welfare of those individuals but may create adverse effects upon others.[116] For example, Professor Okun argued that the use of cost-of-living clauses in contracts is a functional adaptation to uncertainty about price levels, but that widespread use of such clauses in inflationary periods accelerates inflation to the detriment of society as a whole.[117]

Many of these concerns about the free market are of dubious relevance to contract law. Courts are ill-suited to regulate the effects of

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113 Akerlof, *The Market for "Lemons": Quality, Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488 (1970).

114 *See* Farber, *Reassessing the Economic Efficiency of Compensatory Damages for Breach of Contract*, 66 VA. L. REV. 1443, 1457-63 (1980); Riley, *Informational Equilibrium*, 47 ECONOMETRICA 331, 353 (1979); Rothschild & Stiglitz, *Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information*, 90 Q.J. ECON. 629 (1976); Satterthwaite, *Consumer Information, Equilibrium Industry Price, and the Number of Sellers*, 10 BELL J. ECON. 483 (1979); Stuart, *Consumer Protection in Markets with Informationally Weak Buyers*, 12 BELL J. ECON. 562 (1981); Wilson, *The Nature of Equilibrium in Markets with Adverse Selection*, 11 BELL J. ECON. 108 (1980).

115 *See supra* text accompanying notes 38-51.

116 For example, use of long-term contracts can potentially decrease the number of market transactions so sharply that information about current prices becomes greatly restricted. *See* Wilson, *Adaptation to Uncertainty and Small Numbers Exchange: The New England Fresh Fish Market*, 11 BELL J. ECON. 491-92, 499-504 (1980).

117 A. OKUN, *supra* note 106, at 99-103, 278-96, 334-35.

search costs on prices.[118] Other problems, such as those addressed by Okun, are more properly the concern of macroeconomic planners than of jurists. On the other hand, as Professor Eisenberg has recently argued, courts may be justified in refusing to enforce contracts on the grounds of unfairness when search costs are extraordinarily high or when some other radical breakdown in the market has taken place.[119] A classic example is the sale of durable goods to consumers at phenomenal prices under circumstances where competition is clearly ineffective, such as the door-to-door sale of goods to customers who do not speak English.[120] In such extreme circumstances, as Eisenberg points out, courts have been increasingly reluctant to give effect to contracts with unfair terms.[121]

The radical market breakdowns discussed by Eisenberg, however, fail to account for some significant common law restrictions on freedom of contract. For example, penalty clauses generally are invalid even in competitive markets.[122] Similarly, disclaimers of liability for personal injury are generally unenforceable in consumer contracts.[123] As a practical matter, these restrictive rules apply to far more transactions than the few extreme cases of radical market failure considered by Professor Eisenberg. The next section will consider whether these restrictive legal rules serve any economic function.

Legal Restrictions on Contract Terms

Warranty Disclaimers.—One of the best-established restrictions on freedom of contract is the rule restricting the enforceability and scope of warranty disclaimers. All goods carry an implied warranty of suitability for their ordinary uses.[124] Defects in the goods resulting in injury or property damage when the goods are put to their ordinary use constitute a breach of this implied warranty. Under a long-standing common law rule,[125] now embodied in the Uniform Commercial

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118 *See* Schwartz & Wilde, *supra* note 112, at 666-82.

119 Eisenberg, *supra* note 71, at 754-85 (1982). An earlier comment by Professor Kornhauser suggested that information costs might justify judicial or legislative supervision of contract terms. Comment, *Unconscionability in Standard Forms*, 64 CALIF. L. REV. 1151, 1167-79 (1976).

120 *See* Eisenberg, *supra* note 71, at 763-85.

121 For examples of such judicial intervention, see Williams v. Walker-Thomas Furniture Co., 350 F.2d 445 (D.C. Cir. 1965); American Home Improvement v. MacIver, 105 N.H. 435, 201 A.2d 886 (1964); Frostifresh Corp. v. Reynoso, 52 Misc. 2d 26, 274 N.Y.S.2d 757 (Dist. Ct. 1966), *rev'd as to damages*, 54 Misc. 2d 119, 281 N.Y.S.2d 964 (App. Term 1967).

These cases seem to give additional legal protection to impoverished individuals by preventing sharp reductions in their already limited assets. To some extent, the unconscionability doctrine may be part of the social safety net discussed *infra* text accompanying notes 162-76.

122 *See infra* text accompanying notes 147 & 148.

123 *See infra* text accompanying notes 125 & 126.

124 *See* U.C.C. § 2-314(2)(c).

125 The leading case is Henningsen v. Bloomfield Motors, Inc., 32 N.J. 358, 161 A.2d 69 (1960).

Code,[126] attempts to disclaim liability for personal injury resulting from such product defects are ineffective.[127] In a world of perfect information, such a restriction on freedom of contract would make very little sense. Having complete knowledge of the products and warranty terms offered on the market, consumers would choose the combination of product, warranty term, and price best suited to their needs. Competition would force sellers to offer those terms sought by consumers.[128] If any justification for the legal restrictions on warranty disclaimers exists, therefore, it must be based on the absence of perfect information.[129]

The absence of perfect information, however, would not necessarily result in overuse of disclaimers. If competition over warranty terms were effective, disclaimers could serve a variety of useful functions. Warranties provide a form of consumer insurance against accidents. Some consumers may not wish to purchase such insurance coverage. They may already have other insurance, they may be more willing than the average consumer to take risks, or they may be especially careful and thus less likely than the average consumer to become involved in an accident.[130] On the other hand, sellers would have a strong incentive to offer full warranties as an option. By providing additional warranty coverage, a seller could provide a signal to consumers about product quality. If consumers find it difficult to assess the quality of a product before purchasing that product, the seller could use the warranty as an inexpensive means of overcoming consumer ignorance.[131] Given effective competition, warranty coverage would be an available option, which some consumers might waive.

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126 U.C.C. § 2-719(3) makes limitations on damages for personal injury prima facie unconscionable. U.C.C. § 2-302 also has been construed to make warranty disclaimers of such liability unconscionable. J. WHITE & R. SUMMERS, THE LAW UNDER THE UNIFORM COMMERCIAL CODE § 12-11 (2d ed. 1980). Finally, under the Magnuson-Moss Act, if a seller makes any express warranty, it cannot disclaim implied warranties. 15 U.S.C. § 2308 (1976).

127 Because the duty to provide a safe product is not disclaimable, it is often dealt with under tort law rather than contract law. RESTATEMENT (SECOND) OF TORTS § 402A (1965)(see especially comment e); W. PROSSER, HANDBOOK OF THE LAW OF TORTS 634-36, 656-58 (4th ed. 1971). *See also* Epstein, *supra* note 86, at 1739.

128 Priest, *A Theory of the Consumer Product Warranty*, 90 YALE L.J. 1297, 1347 (1981).

129 Widespread agreement now exists that neither monopoly nor less extreme forms of economic concentration in themselves would result in unfair warranty terms. *See* Priest, *supra* note 128, at 1299-1302, 1320-25; Schwartz, *A Reexamination of Nonsubstantive Unconscionability*, 63 VA. L. REV. 1053, 1071-76 (1977).

130 *See* Priest, *supra* note 128, at 1307-19. Other authors have argued that use of disclaimers to sort out low-risk consumers involves a welfare loss, because these consumers must forgo full insurance in order to signal their low-risk status. *See* Ordover, *Products Liability in Markets with Heterogeneous Consumers*, 8 J. LEGAL STUD. 505, 518-20 (1979); Rothschild & Stiglitz, *supra* note 114, at 637-38.

131 *See* Grossman, *The Informational Role of Warranties and Private Disclosures About Product Quality*, 24 J.L. & ECON. 461 (1981); Spence, *Consumer Misperceptions, Product Failure, and Product Liability*, 44 REV. ECON. STUD. 561 (1977).

Unfortunately, several significant barriers exist to effective competition over warranty terms. First, consumers find it difficult to understand the legal language used in warranties.[132] Second, apart from the difficulty of interpreting the language of the warranty, assessing its value may also be quite difficult. In order to determine the value of warranty coverage for a particular product, one would need to determine the accident rate associated with that product and the extent of loss associated with each possible accident. The accident rate will be affected by the design of the product, the manufacturer's quality control and sources of materials and parts, and the level of care of the particular consumer using the product. Gathering such information about a particular product is likely to be quite difficult and costly. Gathering information about a sufficient number of firms to allow comparison is obviously an even more costly and difficult undertaking. If consumers cannot accurately determine the value of warranties, a "lemons" problem arises.[133] As in the Akerlof model, one would expect to find a suboptimal level of quality in the warranties offered.

In addition to these information costs, consumers also may face special difficulties in processing the information they do have available. An area of study known as "cognitive psychology" recently has received increasing attention from economists.[134] Psychologists have developed a large body of experimental data suggesting that the ability of most individuals to process information about risks is limited in three respects.[135] First, individuals are extremely unsophisticated about statistical theory. They tend to assign far too much weight to small samples.[136] In general, they tend to assume that the data they possess represents the real situation; thus, they overlook other evidence sug-

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132 For an excellent discussion of this problem, see Davis, *Protecting Consumers from Overdisclosure and Gobbledygook: An Empirical Look at the Simplification of Consumer-Credit Contracts*, 63 VA. L. REV. 841 (1977).

133 *See supra* text accompanying notes 113 & 114. On the effects of imperfect warranty information, see Gerner & Bryant, *Appliance Warranties as a Market Signal?*, 15 J. CONSUMER AFF. 75, 79 (1981); Goldberg, *The Economics of Product Safety and Imperfect Information*, 5 BELL J. ECON. & MGMT. SCI. 683 (1974). The analogy between unfair contract terms and defective goods is nicely drawn in Leff, *Contract as Thing*, 19 AM. U.L. REV. 131 (1970).

134 *See* Arnould & Grabowski, *supra* note 99, at 29, 34-35, 45; Arrow, *Risk Perception in Psychology and Economics*, 20 ECON. INQUIRY 1 (1982); Simon, *Rational Decision Making in Business Organizations*, 69 AM. ECON. REV. 493, 506-07 (1979).

135 *See* R. NISBETT & L. ROSS, HUMAN INFERENCE: STRATEGIES AND SHORTCOMINGS OF SOCIAL JUDGMENT (1980); Hershey & Schoemaker, *Risk Taking and Problem Context in the Domain of Losses: An Expected Utility Analysis*, 47 J. RISK & INS. 111 (1980); Tversky & Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCIENCE 1124 (1974) [hereinafter cited as Tversky & Kahneman, *Judgment Under Uncertainty*]; Tversky & Kahneman, *The Framing of Decisions and the Psychology of Choice*, 211 SCIENCE 453 (1981) [hereinafter cited as Tversky & Kahneman, *The Framing of Decisions*].

136 R. NISBETT & L. ROSS, *supra* note 135, at 77-82; Tversky & Kahneman, *Judgment Under Uncertainty*, *supra* note 135, at 1125.

gesting the unreliability of their data.[137] In short, they fail to anticipate properly the likelihood of future surprises.[138]

Second, substantial evidence exists that individuals tend to underestimate the likelihood that low probability events will occur.[139] For example, when asked about the probability of their being involved in an automobile accident in the next year, the majority of individuals selected odds of one in one hundred or greater. The real figure is one in ten.[140]

Finally, individual decisionmaking appears to be quite sensitive to the way in which the question that they are deciding is framed.[141] For example, one experiment showed that doctors assess the desirability of an operation differently when told that the survival rate is eighty-five percent than when they are told the death rate is fifteen percent.[142] In another experiment, use of seat belts varied depending on whether individuals were told the probability of an accident per trip or the probability of experiencing an accident in their lifetime.[143]

This failure of individuals to assess risk accurately could be expected to lead consumers to undervalue sharply the benefits of warranty coverage. Apart from individuals' cognitive limitations, emotional factors also may play a part. Considering the hazards associated with purchase of a product might be a substantial source of cognitive dissonance that consumers would prefer to avoid.[144]

Despite the barriers to acquiring and processing information about product warranties, some consumers may manage to acquire and process such information effectively. Professor Priest recently has argued that these consumers provide a sufficient check on the market and that

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137 R. NISBETT & L. ROSS, *supra* note 135, at 25, 41, 142-46; Tversky & Kahneman, *Judgment Under Uncertainty*, *supra* note 135, at 1124-30.

138 This is particularly serious because individuals also tend to be unable to make accurate predictions. Not only do they predict less accurately than simple regression formulae, but even experts refuse to modify their predictions when informed of the improved results they could reach with the regression formula. *See* R. NISBETT & L. ROSS, *supra* note 135, at 140-41. Kenneth Arrow has recently suggested that this cognitive defect causes excessively rapid price movements in certain futures markets. Arrow, *supra* note 134, at 4-6.

139 H. KUNREUTHER, DISASTER INSURANCE PROTECTION: PUBLIC POLICY LESSONS 12-17 (1978); Arnould & Grabowski, *supra* note 99, at 29, 34-35. One explanation for this finding is that probabilities must be high enough to cross an attentional threshold before individuals consider them. H. KUNREUTHER, *supra*, at 182-84; Kahneman & Tversky, *supra* note 36, at 263, 275, 282-83.

140 Arnould & Grabowski, *supra* note 99, at 34.

141 Kahneman & Tversky, *supra* note 36; Tversky & Kahneman, *The Framing of Decisions*, *supra* note 135.

142 Arrow, *supra* note 134, at 7.

143 Arnould & Grabowski, *supra* note 99, at 35. *See also* H. KUNREUTHER, *supra* note 139, at 174-75.

144 *See generally* Akerlof & Dickens, *The Economic Consequences of Cognitive Dissonance*, 72 AM. ECON. REV. 307 (1982).

manufacturers will tailor warranty terms to meet these consumers' needs.[145] Several economic theorists have pointed out, however, that these "marginal" consumers may or may not be representative of the average consumer. For example, consumers who take the trouble to shop for good warranty terms may be less careful when using goods or have less insurance than other individuals. Contract terms tailored to the needs of the marginal consumer thus may not be well suited to the needs of the vast number of consumers.[146]

Penalty Clauses.—Under a long-established common law rule, contract clauses fixing damages for breach are enforceable only if they constitute a reasonable attempt to estimate actual damages.[147] Clauses intended to penalize breach are unenforceable.[148] Yet, penalty clauses seem to be a potentially useful way of protecting plaintiffs who have unusual losses that cannot be proven in court or who are unable easily to detect breaches by the other party.[149] Effective competition presumably would prevent the use of such clauses as a means of exploiting the weaker party to the contract.[150]

Informational asymmetries may partly explain why the courts refuse to enforce these clauses. Consider a contract in which a manufacturing company hires a construction company to build an addition to its factory. Suppose the manufacturer wishes to include a penalty clause in the contract in order to increase the likelihood of performance or to compensate itself for losses that it could not prove in court in the event of breach. The manufacturer needs to determine the probability of breach in order to determine the proper price at which to bargain. The construction companies with which the manufacturer might contract, however, have better information about the probability than does the manufacturer. For any given price and penalty package that the

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145 Priest, *supra* note 128, at 1347.

146 In the standard neoclassical model, which assumes homogeneous goods and contract terms, this problem cannot arise. The average consumer in the neoclassical model would always be willing to pay more for a warranty term than the marginal consumer. In a world of imperfect information and heterogeneous contract terms and goods, however, the average consumer might well prefer more warranty coverage than the marginal consumer, even though the average consumer would be required to pay a higher price than the marginal consumer is willing to pay for these terms. *See* Spence, *Monopoly, Quality, and Regulation*, 6 BELL J. ECON. 417, 428-29 (1975); Trebilcock & Dewees, *Judicial Control of Standard Form Contracts*, in THE ECONOMIC APPROACH TO LAW 93, 110, 117 (P. Burrows & C. Veljanovski eds. 1981). For a discussion of a similar problem in the context of termination clauses, see Goetz & Scott, *supra* note 104, at 1089, 1131-34.

147 RESTATEMENT (SECOND) OF CONTRACTS § 356(1) (1981); J. MURRAY, MURRAY ON CONTRACTS 473-76 (1974). For the sale of goods, this common law rule has been codified as U.C.C. § 2-718(1).

148 RESTATEMENT (SECOND) OF CONTRACTS § 356.

149 *See* Goetz & Scott, *supra* note 3, at 578-79 (1977); Farber, *supra* note 114, at 1477; Klein, *Transaction Cost Determinants of "Unfair" Contractual Arrangements*, 70 AM. ECON. REV. 356 (1980).

150 Goetz & Scott, *supra* note 3, at 589-92; Klein, *supra* note 149, at 360.

manufacturer offers, that package will be most attractive to those construction companies that are least likely to breach the contract. From the manufacturer's point of view, however, it is paying an excessive price to the low-risk builder, since the builder is receiving a higher price than he otherwise would command in return for agreeing to pay a penalty in the event of a breach that is likely never to occur.[151] On the other hand, the construction company cannot assess the reasonableness of the damages specified in the penalty clause without knowing how much it would be required to pay if damages were judicially determined. The manufacturer, however, is in a much better position to know its potential provable damages than are the construction companies that are bidding on the job.[152] Under these circumstances, bargaining between the parties over the penalty and price package is likely to be quite difficult.[153]

In addition, the generally low probability of breach may explain the court's refusal to enforce penalty clauses. As discussed in connection with warranty disclaimers, cognitive psychology has shown that individuals are likely to lack the ability to assess accurately the probability of such events.[154] A construction company that has been successful in the recent past is likely to be overly optimistic in assuming that it will not encounter difficulties in its next contract.[155] The construction company is also likely to overlook the possibility that a penalty clause will give the manufacturer an incentive to provoke a breach.[156] Most lawyers seem to agree that businessmen give insufficient attention to the prospect of future difficulties in their business re-

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151 The manufacturer would like to give a price bonus that compensates the construction company only for (1) the expected amount of penalty payments at the optimal level of risk and (2) the cost of attaining that risk level. If the construction company can reach a lower level of risk or can reduce risk more cheaply than the manufacturer realizes, it will enjoy a price bonus greater than the cost that it will incur as a result of the penalty clause. From the manufacturer's perspective this is an undeserved windfall to the construction company.

152 Although the rule in Hadley v. Baxendale, 9 Ex. 341, 156 Eng. Rep. 145 (1854), allows recovery only for reasonably foreseeable kinds of damage, it does not require that the amount of damage be foreseeable. RESTATEMENT (SECOND) OF CONTRACTS § 351 comment b (1981).

153 Conceivably, competitive bidding might cure these problems; however, the bidding system would have to be rather complicated. Both price and penalty would have to be specified in each bid, and the system would have to be designed to allow simultaneous competition between construction companies (to eliminate the first informational problem discussed in the text) and among manufacturers (to eliminate the second). Transaction and search costs seem likely to impede effective competition in practice.

154 *See supra* text accompanying notes 134-43.

155 There seems to be a tendency among businessmen to overestimate the predictive value of recent business performance. *See* Arrow, *supra* note 134, at 5-6. *See also* Goetz & Scott, *supra* note 3, at 555 n.7 (quoting C. MCCORMICK, HANDBOOK ON THE LAW OF DAMAGES § 147, at 601 (1935)) (on excessive business optimism).

156 *See* Clarkson, Miller & Muris, *Liquidated Damages v. Penalties: Sense or Nonsense?*, 1978 WIS. L. REV. 351, 375-77.

lationships and pay slight attention to the details of their contracts.[157]

Furthermore, penalty clauses involve several potential externalities. First, they arguably provide an incentive for litigation. Plaintiffs have a greater reason to sue because the potential recovery is greater than it would be if only actual damages could be recovered. Defendants have a corresponding reason to resist more vigorously. The result would be more lawsuits and more hotly contested lawsuits. Since the parties pay only a small part of the costs of the court system, this imposes an externalized cost on the public.[158] Second, penalty clauses can increase the probability of business failures. In a frictionless world this might be of little concern, but in reality the bankrupted party may well be involved in a web of long-term business relations with others, and these too will be disrupted by the business failure.[159] Furthermore, if these other contracting parties fail to include penalty clauses in their own contracts, they will be disadvantaged in receiving a share of the assets in bankruptcy, which are generally distributed on a pro rata basis.[160] Finally, if the use of penalty clauses were widespread, a wave of business failures triggered in a recession by penalty clauses could have a severe effect on investor confidence. It may be in the public interest to nurse marginal firms through recessionary periods rather than forcing them out of business, as penalty clauses would tend to do.[161]

Thus, economic theory suggests strong, though hardly conclusive, reasons for doubting that the free market would subject penalty clauses and warranty disclaimers to sufficient control. Analysis of the individual clauses disfavored by the common law does not entirely explain, however, why those clauses, rather than other contract terms, have been singled out for special regulation. The next section will propose a tentative explanation.

Contract Law and the Safety Net.—One of the most powerful principles of contract law is freedom of contract—the power of parties to allocate risks between themselves. A number of contract rules, however, reveal a countervailing principle of loss spreading. The rules against penalty clauses and warranty disclaimers for personal injury prevent catastrophic losses from being imposed on one party to the

157 *See* Beale & Dugdale, *Contractual Remedies*, 2 BRIT. J.L. & SOC'Y 45 (1975); Macaulay, *Non-contractual Relations in Business: A Preliminary Study*, 28 AM. SOC. REV. 55, 58-60 (1963).

158 Rubin, *Unenforceable Contracts: Penalty Clauses and Specific Performance*, 10 J. LEGAL STUD. 237, 244-45 (1981).

159 Those most obviously affected are customers and suppliers with explicit or implicit long-term contracts, the business's employees, and its major creditors. Each of these groups, in turn, is involved in a similar set of relationships of its own. *See also infra* note 169. The strength of these externalities is illustrated by the pressure for a governmental "bail-out" of the Chrysler Corporation when it neared bankruptcy. N.Y. Times, Jan. 8, 1980, § 4, at 1, col. 3.

160 *See* 11 U.S.C. § 726(b) (Supp. V 1981).

161 *See* F. SCHERER, *supra* note 41, at 369. *See also infra* note 164.

contract. Bankruptcy laws further restrict the extent of the losses that a party can suffer.[162] Even outside of bankruptcy, the *Hadley v. Baxendale*[163] rule and the certainty rule of contract damages[164] tend to result in undercompensation to plaintiffs,[165] thus requiring losses at least partially to be borne by both parties. Rules of commercial impracticability under the Uniform Commercial Code also tend to restrict exposure to extreme risks.[166] It is difficult, if not impossible, for the parties to negotiate their way around these rules.

There seems to be a consistent principle in these rules. In addition to the principle of freedom of contract, contract law seems to embody an insurance principle limiting individual catastrophic losses. The social policy of risk sharing, which Calabresi has noted in tort law,[167] also seems to play a role in contract law.

In order to understand the social functions of risk sharing, it may be helpful to consider a problem faced by many primitive societies. Hunter-gatherer societies often face uncertain, fluctuating food supplies. In response, these societies commonly impose mandatory sharing rules. During scarcity periods, successful hunters are not allowed to profit from the scarcity but rather must share their food with some less successful members of the society. As Posner has pointed out, this system makes economic sense given the difficulty of establishing insurance markets and the large degree of uncertainty faced by members of these primitive societies.[168] The problems of these primitive societies seem at first glance quite different than those of modern technological economies. Nevertheless, modern societies are faced with a number of similar risks. Various kinds of surprises buffet the economy, such as oil embargoes, wars, shifts in consumer tastes, technological uncertainty, recessions, and inflation. These economic shocks play the same role in our society that drought and game migration play in hunting societies.

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162 The general policy of the bankruptcy laws is to give the debtor a fresh start. *See* 11 U.S.C. § 727 (Supp. V 1981); Local Loan Co. v. Hunt, 292 U.S. 234, 244 (1934).

For other economic analyses of bankruptcy law, see Symposium, *The Economics of Bankruptcy Reform*, 41 LAW & CONTEMP. PROBS. 1 (1977).

163 *See supra* note 152.

164 The certainty rule disallows damages that cannot be proved with reasonable certainty. RESTATEMENT (SECOND) OF CONTRACTS § 352 (1981).

165 *See* Farber, *supra* note 114, at 1443 n.2, 1445 n.13.

166 U.C.C. § 2-615 provides that a seller of goods is excused from performance "if performance as agreed has been made impracticable by the occurrence of a contingency the non-occurrence of which was a basic assumption on which the contract was made."

In addition to the legal rules mentioned in the text, various forms of welfare payments, such as public assistance and unemployment compensation, clearly have a similar purpose of loss spreading. *See also supra* note 121 (discussion of the possible function of the unconscionability doctrine).

167 G. CALABRESI, THE COSTS OF ACCIDENTS 39-67, 278-85 (1970).

168 *See* R. POSNER, THE ECONOMICS OF JUSTICE 152-62 (1981).

Our response, like theirs, has been to create a mandatory risk sharing system—a social safety net.

Strong reasons exist not to allow individuals or firms to bargain their way out of this social safety net. First, when individuals or firms suffer catastrophic losses, externalities are likely to occur. In the case of individuals, the externalities are most immediately felt by other family members. To the extent that individuals have a claim on charity or the welfare system, the externality is felt by larger segments of society. As mentioned earlier, because of the involvement of business in a web of long-term business arrangements, business failures also have such negative externalities.[169] Furthermore, like other insurance systems, the safety net also involves a problem of "adverse selection."[170] At any given time, those individuals with the lowest risk in the participating group would have an incentive to opt out of the insurance system, since there seems to be no feasible way of adjusting premiums to risk levels. The result of low-risk individuals opting out could be the collapse of the insurance system.[171] Finally, developments in cognitive psychology suggest that individuals' ability to assess risks accurately is limited. In particular, individuals fail to anticipate that their recent experience may under-represent the likelihood of catastrophe and that the future may have major surprises in store.[172]

To take an extreme case, consider the former laws that allowed imprisonment for debt. The neoclassical model would have favored such laws, just as present-day scholars argue for freedom of contract with respect to debtor protection.[173] Indeed, John Quincy Adams made the standard neoclassical argument that abolishing debtors' prison would only injure the least creditworthy debtors, who would be unable to obtain loans unless creditors could rely on the sanction.[174] Acceptance of this argument could have had serious economic effects. For example, given the extent of optimism in the 1920's, it is easy to imagine that large numbers of individuals at that time would have agreed to the possibility of debtors' prison in order to obtain additional funds for speculation. Obviously, these individuals would have failed to give

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169 *See supra* text accompanying note 159. For the suggestion that full enforcement of contracts could lead to a string of successive business failures and that market solutions to this problem are improbable, see Kennedy & Michelman, *Are Property and Contract Efficient?*, 8 HOFSTRA L. REV. 711, 747 (1980).

170 For further elaboration on this concept, see *supra* note 114 and sources cited therein.

171 This is Posner's explanation for why primitive societies make their sharing rules mandatory. *See* R. POSNER, *supra* note 168, at 155-56.

172 *See supra* text accompanying notes 134-43.

173 *See, e.g.*, R. POSNER, *supra* note 4, at 86-88; Epstein, *Unconscionability: A Critical Reappraisal*, 18 J.L. & ECON. 293, 305-15 (1975). For historical surveys, see McGovern, *Forfeiture, Inequality of Bargaining Power, and the Availability of Credit: An Historical Perspective*, 74 NW. U.L. REV. 141, 143-44 (1979).

174 S. BEMIS, JOHN QUINCY ADAMS AND THE UNION 256-57 (1956).

sufficient weight to the possibility of a complete economic collapse. Furthermore, the macroeconomic myopia of these individuals would affect not only themselves and their families, but also the economy at large. As difficult as it was for the country to recover from the Depression of the 1930's, imagine how much more difficult it would have been if hundreds of thousands of investors and businessmen had been imprisoned for failure to pay their debts.[175] While this is an extreme example, the same considerations may underlie the common law rules against enforcing warranty disclaimers and penalty clauses.

The "safety net" clearly has an important function in our society. Although it decreases economic efficiency in the short run, this effect appears to be outweighed by its contribution to long-run, dynamic efficiency.[176]

CONCLUSION

This Article has explored the implications for contract law of two different economic theories. The Article first explained the neoclassical economic model and its implications. The most important of those implications were that contracts should be enforceable and that the government should not attempt to regulate the terms of contracts.[177] This endorsement of freedom of contract is, of course, most congenial to conservatives. In addition to this ideological appeal, however, the neoclassical economic model also has considerable intellectual attraction. It describes aspects of reality that clearly play an important role in the economy.[178] Moreover, its intellectual elegance and mathematical sophistication plainly add to its appeal.

The more recently developed models that the Article considered next do not possess the same degree of intellectual elegance as the neoclassical economic model. By attempting to account for factors ignored in the neoclassical model, such as information costs, these newer models provide a richer and more complex view of reality. Unfortunately, this increased richness results in a loss of conceptual simplicity and mathematical elegance. Nonetheless, by providing a fuller description of the functions of contract, these models do provide additional reasons

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175 On the role of the investor in recoveries from recessions, see R. GORDON, *supra* note 91, at 102, 166, 432-34.

176 Obviously, this judgment cannot be made with any great degree of certainty. The "safety net" also appears to reflect strongly held beliefs about equity. Both considerations of efficiency and equity, perhaps along with simple paternalism, probably played a role in the creation of the "safety net." *See* P. ATIYAH, THE RISE AND FALL OF FREEDOM OF CONTRACT 602-781 (1979). For an interesting philosophical discussion of social protection against economic losses, see McClennen, *Some Decision-Theoretic Reflections on Welfare Protection*, 9 HOFSTRA L. REV. 1453 (1981).

177 *See supra* text accompanying notes 75-85.

178 For instance, people and firms often do act in a rational, wealth-maximizing fashion and supply and demand have some tendency to balance.

for a general policy of enforcing contracts.[179] Unlike the neoclassical economic model, however, they also support recognition of exceptions to the general policy of enforcement. In particular, these models seem to justify some of the well-established legal rules denying enforcement to particular contract clauses.[180]

The picture that begins to emerge from these newer theories is that of a world in which market transactions are only one among a group of important economic institutions. This Article has suggested that among these other institutions is a legal "safety net." This safety net tends to spread losses and prevent individuals from bargaining their way into potentially catastrophic losses. Although no definitive new model has arisen to supplant the neoclassical model, the newer theories hold considerable promise for clarifying many issues of interest to legal scholars.[181]

Economic theory cannot provide the final answers to legal problems, if only because economic theory itself has no final answers.[182] Nor, except to a limited extent, can it resolve the ultimate normative issues underlying many disputes about law.[183] Nonetheless, economic theory can provide an illuminating perspective on how legal rules relate to the functioning of the economic system.[184] Understanding the functions served by legal rules is the first step toward evaluating them.[185]

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179 *See supra* text accompanying notes 102-06.

180 *See supra* text accompanying notes 124-61.

181 These models clearly tend to support conclusions drawn by some legal scholars about the inadequacy of the neoclassical model with respect to long-term contractual relations, and the consequent desirability of judicial intervention to ensure good faith. I. MACNEIL, THE NEW SOCIAL CONTRACT: AN INQUIRY INTO MODERN CONTRACTUAL RELATIONS (1980); Speidel, *Court-Imposed Price Adjustments Under Long-Term Supply Contracts*, 76 NW. U.L. REV. 369, 404-22 (1981).

182 Indeed, the excitement of economic theory today stems precisely from its being in a state of flux. For an excellent critique of conventional economic theory, which appeared while this Article was in press, see L. THUROW, DANGEROUS CURRENTS: THE STATE OF ECONOMICS (1983).

183 With the significant exception of Judge Posner in THE ECONOMICS OF JUSTICE, *supra* note 168, at 60-76, 88-115, it is difficult to find anyone who seriously argues that economic efficency is either the ultimate or the exclusive measure of value.

184 This Article has not attempted any serious investigation of the causal connection, if any, between the economic utility of legal rules and their adoption by the legal system. It does not seem unreasonable to assume, however, that the stable features of a society serve *some* function, and are not simply accidental. *See* Leff, *Economic Analysis of Law: Some Realism About Nominalism*, 60 VA. L. REV. 451, 463-69 (1974).

185 Although this Article has argued that various restrictions on freedom of contract serve useful functions, it does not follow that better means of achieving those functions could not be devised.