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by

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Abstract

In standard models of contracts, efficient incentives for the promisor require him to pay damages for non-performance, and efficient incentives for the promisee require her to receive *no* damages for non-performance. To give efficient incentives to both parties, we propose a novel contract requiring the promisor to pay damages for nonperformance to a third party, not to the promisee. In exchange for the right to damages, the third party pays a price to the promisee in advance, before performance or non-performance occurs. The price more than offsets the promisee's expected loss from abandoning her liability right. By improving incentives, the third party contract creates value and everyone benefits. We call this novel contract "anti-insurance" because it strengthens incentives by concentrating risk, whereas insurance erodes incentives by spreading risk. Specifically, by increasing her risk from non-performance, anti-insurance improves the promisee's incentives to restrain reliance and assist performance. Anti-insurance is potentially valuable in contracts for goods susceptible to consumer misuse (e.g. automobile transmissions), and goods or service contracts requiring buyer's cooperation (e.g. building construction). We recommend allowing sellers to substitute anti-insurance for implied warranties in consumer transactions, and to substitute anti-insurance for strict liability for consumer product injuries.

Robert Cooter and Ariel Porat*

Anti-insurance

Contracts pose a dilemma for incentives. Without liability for damages, the promisor has an incentive to make too little effort to perform. Efficient incentives, consequently, require the promisor to pay damages for non-performance. However, with a right to damages, the promisee has an incentive to rely too much and to assist the promisor too little. Efficient incentives, consequently, require the promisee to receive *no* damages for non-performance. Thus efficiency in standard models of contracts requires the promisor to pay expectation damages for non-performance and the promisee not to receive any damages.[1]

This dilemma can defeat a contract, as in the following example:

> Example 1: Warranty for Transmission on Used Car— Seller of a used car undertakes to repair its manual transmission before selling it to Buyer. Buyer fears that Seller will not supply a good transmission unless compelled by a warranty. So Buyer asks Seller to promise that the transmission will work for one year. Transmission failure within one year would breach the contract and cause the Seller to pay damages. However, Seller fears that Buyer might abuse a warranted transmission, so Seller offers a warranty for only three months. To allay Seller's fears, Buyer proposes that his abuse of the transmission should void the warranty, but Seller rejects this proposal because he could not prove Buyer's abuse in court. The parties stop negotiating and no sale occurs.

To succeed in Example 1, a contract must give incentives for Seller to provide a good transmission and for Buyer to take care of it. For enforceable promises, contract law requires the promisor to pay expectation damages for non-performance to the promisee, thus eroding the promisee's incentives. For unenforceable promises, contract law does not require the promisor to pay damages, thus eroding the promisor's incentives. The standard

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devices available in contract law, which we discuss later, are insufficient to solve this dilemma.[2]

We propose to solve this dilemma by a novel contract involving a third party. The contract requires the promisor to pay damages to the third party in the event of non-performance.[3] Liability to the third party gives the promisor efficient incentives to perform. The contract also requires the promisee to waive any rights to receive damages in the event of non-performance. No damages for the promisee give her efficient incentives to restrain reliance and assist performance.[4] In Example 1, Seller would promise to pay compensation to Third Party if the transmission fails. This fact gives Buyer confidence that Seller will supply a good transmission. The fact that Buyer would not receive any compensation if the transmission fails gives Seller confidence that Buyer will not abuse the transmission.

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[1] Robert Cooter, "Unity in Tort, Contract, and Property" 73 *Cal. L. Rev.* 1, 3-4 (1985).

[2] One of those devices is a defense of comparative negligence, which some jurisdictions apply to warranties. See James J. White & Robert S. Summers, *Uniform Commercial Code* (5th ed., 2000) 410-3. As we explain later, the usefulness of a comparative negligence rule is contingent upon the promisee's behavior being observable and verifiable.

[3] For a contract allowing a third party to collect damages in case of a breach, see *St. Joseph's Association v. Magnier* 1861, 16 La.Ann. 338. In that case hatters agreed to close stores on Sunday, and stipulated that any hatter violating the agreement should pay a fine of $100 to the asylum of the St. Joseph's Orphans. The asylum brought a suit against the defendant to recover the stipulated fine, arguing that he opened his store on several Sundays. The court dismissed the suit, saying, "It is a strained and unnatural construction to say that the contract was entered into with the view of making a donation to the plaintiffs". (We thank Mel Eisenberg for this example.)

In the diamond industry, arbitrators may sometimes impose sanctions on the party in breach involving not only compensation to the aggrieved party but also a donation to charity. Lisa Bernstein, "Opting out the Legal System: Extralegal Contractual Relations in the Diamond Industry" 21 *J. Leg. Stud.* 115, 134-5 (1992) 127.

[4] Sometimes non-legal sanctions create the same incentives. See Robert Cooter & Ariel Porat, "Should Court Decuct Non-legal Sanction from Damages?" forthcoming 30 *J. Leg. Stud.* (June 2001); Ariel Porat, "Enforcing Contracts in Dysfunctional Legal Systems: The Close Relationship Between Public and Private Orders" 98 *Mich. L. Rev.* 2459 (2000).

In this novel contract, the third party receives the right to damages for non-performance. In exchange for this valuable right, the third party must pay a price to the promisee in advance, before anyone knows whether the promisor will perform or breach. In a voluntary agreement, everyone must benefit. Consequently, the third party contract must benefit the promisor, promisee, and the third party. Otherwise there will not be an anti-insurance agreement.

To illustrate by Example 1, Third Party offers to pay Buyer for the right to collect damages for transmission failure. To induce acceptance, Third Party must offer a price to Buyer that more than offsets her expected loss from abandoning her liability right. Abandoning her liability right provides an incentive for Buyer to care for the transmission, which reduces Seller's liability. Third Party can, consequently, demand payment from Seller as a condition for purchasing Buyer's liability right. In many circumstances, everyone can benefit because the third party contract creates value. Later we illustrate this result numerically. Anti-insurance creates double liability, so injurer and victim have incentives for precaution.

We call this novel contract "anti-insurance" because it reverses the usual insurance contract. In the usual insurance contract, the insurer assumes the insured's risk, thus eroding the insured's incentives to affect the risk. For example, when an insurance company assumes the car owner's risk of theft, the owner has less incentive to prevent theft. In an anti-insurance contract, the anti-insurer increases the anti-insured's risk, thus strengthening the anti-insured's incentive to affect the risk. In brief, insurance erodes incentives by spreading risk, and anti-insurance strengthens incentives by concentrating risk. To illustrate by contract law, if non-performance of a promise will trigger compensatory damages, then the promisor insures the promisee against non-performance, which erodes her incentives to assist performance and restrain reliance. Anti-insurance restores the promisee's incentives by transferring her liability right to the anti-insurer.

Anti-insurance is potentially useful whenever two or more people can contract to reallocate a risk affected by their actions. The risk can be nonperformance of a contract or accidental harm in torts. Market applications of anti-insurance include goods susceptible to consumer misuse (e.g. automobile transmissions), and goods or service contracts requiring buyer's cooperation (e.g. building construction). Legal applications include allowing

sellers to substitute anti-insurance for implied warranties in consumer transactions, and allowing sellers of certain kinds of goods to substitute anti-insurance for strict liability for some injuries caused by consumer products. Besides risky losses, anti-insurance applies to risky gains, as when two people jointly produce an uncertain payoff. Market applications include investment and employment contracts where the joint efforts of different people and luck produce a product.

Part I develops the concept of anti-insurance through a numerical example. Part II explains the factors determining the scope of anti-insurance against losses, and Part III provides examples. Part IV extends the application of anti-insurance from risky losses to risky gains. Part V explains how to recast anti-insurance for losses into anti-insurance for gains, or vice versa. Part VI discusses the advantages of anti-insurance over other legal devices that solve incentive problems, and the desirability of replacing certain forms of legal liability with anti-insurance. In Part VII we will speculate on some further extensions of anti-insurance.

I. Numerical Example

We provide a numerical example illustrating anti-insurance for non-performance of a contract. The promisee pays the promisor for a promise whose performance creates 100 in value for the promisee. In the event of nonperformance, the contract requires the promisor to pay expectation damages of 100 to the promisee. We assume that non-performance causes no other losses to the promisee, promisor, or third parties. We also assume that expectation damages secure efficient incentives for the promisor. We will focus on the promisee's incentives.

Having made the contract, the promisee either assists or does not assist performance, and the promisor either performs or does not perform, as depicted in

Figure 1. Assume that cooperation by the promisee costs 5 and increases the probability of performance from .7 to .9. Thus the promisee spends 5 to reduce the expected loss from .3(100)=30 to .1(100)=10. The expected net gain from promisee's

assistance equals –5+(30-10)=15, so efficiency requires the promisee to assist the promisor.

The promisee, however, does not enjoy the gain of 15 from assisting the promisor. Rather, the promisee receives 100 from performance of the contract and 100 in damages from nonperformance of the contract, so the promisee gains nothing from spending 5 to assist the promisor. If the two parties can find a mechanism to induce promisee's assistance, they can create expected value of 15. Anti-insurance is the mechanism.

Figure 1: Assistance and Performance
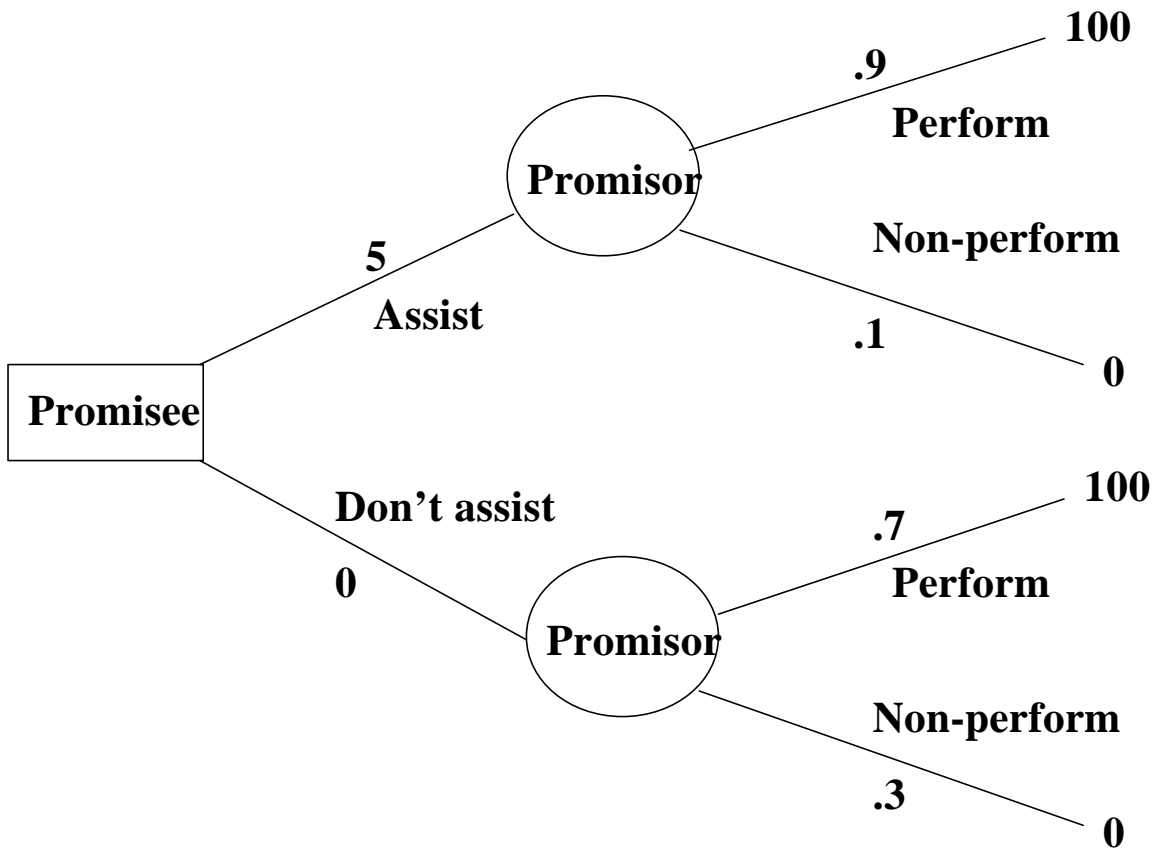
We assume that the parties cannot include a term in the contract requiring the promisee to cooperate because cooperation is unobservable and unverifiable. To induce promisee's cooperation, the promisee assigns his rights to receive damages in case of nonperformance to an anti-insurer, as depicted in Figure 2. After assigning the promisee's liability right, the promisee receives no compensation for the loss of 100 that she suffers from non-performance. Consequently, the promisee will spend 5 to lower the probability of non-performance from .3 to .1.

We explained that transferring the promisee's liability rights to the anti-insurer induces the promisee to cooperate. However, cooperation is costly and the liability right that the promisee gives up is valuable. In order to induce the promisee voluntarily to anti-insure, the anti-insurer and promisor must pay the promisee at least the sum of the cost of assisting and the value of the liability right. The promisor, promisee, and anti-insurer are in a bargaining situation. By cooperating they can all benefit. The obstacle to cooperation is agreeing on the division of the surplus.
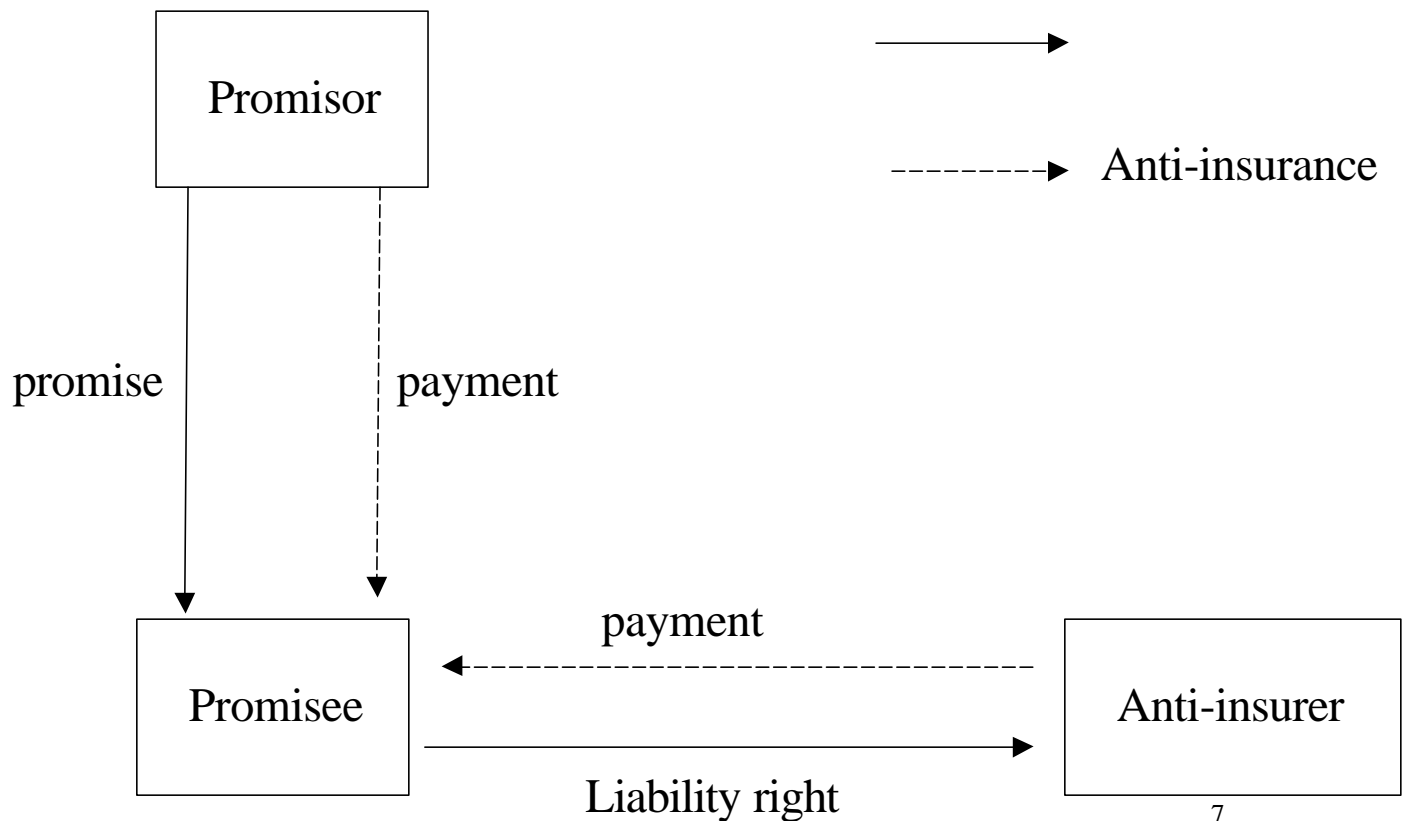
Figure 2: Ant-insurance

Table 1 illustrates the computation of a reasonable solution to the bargaining problem depicted in Figure 2. The first column indicates the payoffs without cooperation. According to the first column, the promisor expects to lose 30, the promisee expects to lose 0, and the anti-insurer receives 0. The second column indicates the payoffs with cooperation. According to the second column, the promisor expects to lose 10 with promisee's assistance, which costs the promisee 5. Thus cooperation increases total value by 15. The Nash bargaining solution provides a useful rule of thumb for predicting bargaining outcomes. The Nash bargaining solution requires each party to receive his threat value plus an equal share of the surplus. Non-cooperation defines the threat positions of the parties in a bargaining game. Column 3 depicts the Nash bargaining solution, in which each player receives his payoff in column 1 plus 1/3 of the surplus of 15.

Table 1: Bargain for Anti-Insurance

Column 1	Column 2 expected payoff without promisee's assistance	Column 3 expected payoff with promisee's assistance	Column 4 Nash bargain solution	Column 5 anti-insurance contract
promisor	.3(-100)	.1(-100)	-25	-15+.1(-100)
promisee	0	-5	+5	20+.1(-100)-5
anti-insurer	0	0	+5	-5+.1(100)
total	-30	-15	-15	-15

Table 1 depicts bargaining for anti-insurance. Perfectly competitive markets, however, preclude bargaining. If the market for anti-insurance were perfectly competitive, then the anti-insurer would receive zero profit, so the price of anti-insurance would equal its cost to the anti-insurer. In the numerical example, the perfectly competitive anti-insurance contract differs from the bargained contract in that the promisor and promisee divide the profits that otherwise go to the anti-insurer. To depict perfect competition for anti-insurance, modify Table 1 by taking 5 away from the anti-insurer and divide it between the other two parties, so that the solution gives an additional 2.5 to the promisor

and promisee. Table 1 implicitly assumes zero transaction costs for anti-insurance. In general, perfectly competitive markets for anti-insurance charge a price equal to transaction costs in exchange for increasing the value of the underlying contract by improving the incentives of the parties**.**

II. Scope for Anti-Insurance: Variables

We have explained the concept of anti-insurance and illustrated it numerically. Now we will discuss the scope of its application. To appreciate the determinants, we will contrast insurance and anti-insurance. Sometimes contractual parties wish to spread risk, in which case they require insurance, and sometimes they wish to concentrate risk, in which case they require anti-insurance. We will discuss the most important variables determining whether to spread or concentrate risk. We save for last our discussion of asymmetrical information, which raises the most difficult practical and conceptual issues.

Attitudes towards risk: Most people are averse to risks involving a large proportion of their wealth, and they are not averse to risks involving a small proportion of their wealth. Consequently, insurance is attractive when people bear large risks relative to their wealth, and anti-insurance is attractive when people bear small risks relative to their wealth. To illustrate by Example 1, the cost of a transmission is small relative to the wealth of most car owners.

Responsiveness to risk: Victims affect the probability and magnitude of losses by choosing their levels of activity and care. In the case of contracts, the promisee can decrease the expected loss by cooperating with the promisor, assisting him in performance, revealing information during performance, taking precautions, reducing activity level, avoiding over reliance or mitigating the damages. By removing risk, liability and insurance can make victims unresponsive to the probability and magnitude of losses. To ameliorate the problem, insurance contracts often leave some losses uncovered, as with deductibles and co-insurance. For example, insurance against injury covers medical costs and leaves pain and suffering uncovered. The more victims respond to risk, the more it costs to spread risk by insurance and the larger the gain from concentrating risk by anti-insurance. To illustrate by Example 1, the more car owners harm transmissions in response

to a warranty, the more a warranty costs and larger the gain from substituting anti-insurance for warranties.

Changed circumstances: When circumstances change, the parties can sometimes benefit by renegotiating the contract and modifying it. If modification counts as performance, the two parties to the original contract have an incentive to avoid liability to the anti-insurer by modifying the contract, even if the modification is unproductive. If modification counts as nonperformance, the two parties to the original contract have an incentive to avoid liability to the anti-insurer by not modifying the contract, even if the modification is productive. Thus anti-insurance can cause the parties to make unproductive modifications or not to make productive modifications. Moreover, anti-insurance can cause a dispute over whether or not performance of the renegotiated contract is performance or non-performance of the original contract. In principle, negotiations with the anti-insurer can overcome these distorted incentives.[5] In reality, anti-insurance will impede responsiveness to changed circumstances. Thus stable circumstances favor anti-insurance and changing circumstances disfavors it. To illustrate by Example 1, automobiles are familiar, statistically predictable products, so the circumstances of their use seldom change in unforeseeable ways.

Transaction costs: Transaction costs typically fall with volume, so viable insurance or anti-insurance markets often require a large scale. The need for high volumes to lower transaction costs presents an obstacle to the development of anti-insurance markets. In Example 1, a high volume in used car sales favors the development and application of actuarial methods necessary to insurance and anti-insurance.

Repeat transactions: Long run relationships generally inhibit opportunistic behavior, thus reducing the need for the constraints created by contracts, including anti-insurance. Conversely, one-shot transactions increase the need for anti-insurance to improve victims' incentives. To illustrate by Example 1, high stakes and tentative relationships make used car sales notorious for opportunism.

Now we turn to asymmetrical information, which raises the hardest issues practically and conceptually.

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[5]   This is an application of the Coase Theorem.

Verifiable: If the court cannot verify victim's behavior, then the parties cannot make damages conditional on victim's good behavior. Anti-insurance motivates the promisee to reduce risk without needing courts to verify the promisee's behavior. Consequently, unverifiable behavior by victims favors anti-insurance.[6] To illustrate by Example 1, owner's care with the car's transmission is unverifiable by courts. Consequently, a term voiding a warranty on proof of owner's abuse is unenforceable. In contrast, anti-insurance requires verification of harm, not its cause.

Observable: Harm to the victim, such as non-performance of a contract, can be observable or unobservable to others. Asymmetries in observability cause a series of potential problems.

-- *Victim's reporting problem*: In order to know when to assert a claim, the anti-insurer must know when a victim suffered a loss. If the anti-insurer cannot observe victim's harm, the anti-insurer may need to rely on victim's report of harm to know when to assert the liability right. The *victim's reporting problem* refers to the problem of inducing the promisee to report the harm to the anti-insurer. The anti-insurer may pay the promisee a fixed fee or a percentage of damages for making a report. These payments correspond, respectively to deductibles or co-insurance for insurance. In addition, the anti-insurance contract might stipulate large damages for buyer's failure to report or seller's inducement of buyer's failure to report.[7] By withholding the report, however, the promisee can save the promisor the cost of paying damages to the anti-insurer. So the promisor has an incentive to pay the promisee not to report the harm. This payment appropriates the rights of a third party, so it is certainly illegal and probably actionable as fraud or tortious inducement to breach.

To illustrate by Example 1, Anti-insurer needs Buyer to report transmission failures so that Anti-insurer can assert liability rights against Seller. Buyer whose transmission fails, however, gains nothing from disclosing this information to Anti-insurer. Anti-insurer might pay Buyer to make such disclosures. However, Seller might offer to pay Buyer even

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[6]   Anti Insurance may be effective also when the promisor's behavior is unverifiable. See *infra*.

[7]   Although a stipulated damages clause is subject to the scrutiny of the court, which may find it unenforceable for being a penalty. *See*

more *not* to disclose transmission failure to Anti-insurer. This payment by Buyer to Seller appropriates the Anti-insurer's rights, so it is certainly illegal and actionable.

Successful anti-insurance markets require institutional mechanisms to overcome the reporting problem. Various disclosure mechanisms might ameliorate the problem, such as requiring Seller in Example 1 to disclose his account books to Anti-insurer. Besides criminal and civil sanctions, more flexible non-legal sanctions might solve the problem. To illustrate by Example 1, dealers who pay buyers not to report transmission failures might risk loss of reputation and the subsequent refusal of anti-insurers to deal with them.

--Injurer's non-liability problem: A different problem, which also relates to observability, is the risk that the anti-insurer will secretly agree not to collect damages from injurer in case of harm to the victim.[8] The secret agreement deprives the victim of the advantages of strong incentives for the injurer to reduce the risk of harm. Again, the secret agreement is illegal and actionable, but non-legal mechanisms may solve the problem better than legal mechanisms. For example, victims may demand that anti-insurers have strong reasons not to risk their reputation, as when the anti-insurer is a consumer organization**.**

To illustrate by Example 1, Anti-insurer and Seller can agree that in case of transmission failure Seller will pay little or nothing to Anti-insurer. Consequently, Buyer mistakenly supposes that Seller has strong incentives to provide a good transmission. To avoid this risk, Buyer might insist that Anti-insurer should be a consumer organization or a large corporation.

III. Anti-Insurance for Losses: Examples

Now we turn to another example, which is identical to the first one, except that the car is new, not used.

> Example 2: Warranty for Transmission on New Car—Manufacturer makes and sells new cars. As proof that transmission is well designed and made Manufacturer promises that the transmission will work for one year. Transmission failure within one year obligates the Manufacturer to pay damages. Some buyers want Manufacturer to guarantee the transmission for three years, but Manufacturer knows that some buyers abuse a warranted transmission and abuse is not provable in court. To solve this problem, Manufacturer proposes a contract transferring

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[8]   Under certain circumstance the anti-insurer and the victim can try cheating the injurer.

Buyer's liability right to Anti-Insurer when the first year warrant expires, who pays for the valuable right.

The critical difference between used and new cars concerns individualized versus standardized quality. In Example 1, Seller repairs the transmission of the used car for an individual buyer, whereas in Example 2 Manufacturer supplies the same quality of transmission to all buyers. Consequently, Manufacturer has a strong incentive to provide high quality transmissions when many buyers have anti-insurance, but any single buyer's anti-insurance has little influence on Manufacturer. In Example 2, each buyer wants everyone else to buy anti-insurance, but no individual buyer wants to buy anti-insurance. In brief, each buyer of a new, mass-produced product wants to free ride on others' anti-insurance. In this example, no individual buyer benefits from having anti-insurance, but all buyers benefit from everyone having anti-insurance. Consequently, the manufacturer may include anti-insurance in the bundle of non-optional terms of the sale.

Here is another example from a different kind of contract with the same reasons for anti-insurance as Examples 1 and 2.

> Example 3: Terminating Employment Contract: Quality of Worker's Work is Unverifiable - Employer offers Worker an employment contract for one year. The contract stipulates that Employer can fire worker for any reason or no reason after giving one month's notice. Worker fears that he will quit his presence job in reliance on the new employment contract and then get fired from the new job.[9] To avoid this problem, Worker proposes to replace the "at will" clause with a "for cause" clause, which stipulates that Employer can only fire Worker for one of the causes enumerated in the contract such as insufficient effort at work. Employer refuses because "cause" is too hard to prove in court. Instead, Worker proposes retaining the "at will" clause and adding a clause stating that if Employer fires worker then Employer must pay damages to Anti-Insurer, who pays for the liability right.

The motivation for anti-insurance is identical in Example 3 as in Examples 1 and 2, specifically to induce good behavior by the victim when proving bad behavior is difficult in court. An important difference in the examples, however, is transaction costs. Employment contracts are more individually tailored, so the transaction costs of anti-insurer will be higher for employment contracts than transmissions. Specifically, the anti-insurer will have more difficulty deciding how much to offer to pay for the victim's

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[9]   Cf. *Grouse v. Group Health Plan, Inc.* 306 N.W. 2d 114 (Minn 1981).

liability rights. If, however, Employer is a large company with many employees, the transaction costs may be low enough to make the anti-insurance contract benefit everyone.

Next we modify Example 3 to illustrate a problem with mitigation of damages after breach of contract.

> Example 4: Terminating Employment Contract: Efforts to Mitigate Damages are Unverifiable - Employer offers Worker an employment contract for one year. Contract allows Employer to fire worker "at will." To protect his reliance, Worker asks Employer to change the contract to allow firing "for cause," so that Employer is liable for firing Worker who does his job. Employer fears that damages will rise quickly if fired Worker has little incentive to find another job, so Employer refuses. Instead, Worker proposes retaining the "for cause" clause and adding a clause stating that Worker transfers his liability rights to Anti-insurer, who pays for the liability rights.

This example illustrates that unverifiable mitigation may be insufficient, in spite of a legal burden to mitigate.[10] Anti-insurance solves the problem by giving the promisee incentives to mitigate damages without any need to verify. If Employer is a large company with many employees, scale economies will reduce the transaction costs of anti-insurance.

Now we turn to an example that in which the promisee should assist performance and restrain reliance.

> Example 5: Construction Contract –Promisee owns a restaurant that needs a larger facility. Promisor, who is a builder, promises to construct the new facility for occupancy on September 1. Promisee knows better than promisor how to induce recalcitrant city inspectors not to hold up construction. Promisee needs to order more food in advance for sale in the larger facility. To induce Promisee's assistance with the city inspectors and restraint in ordering food, Promisee transfers his liability rights for breach of contract to Anti-insurer. Anti-insurer pays promisee in advance for the transfer of liability rights.

Notice that Promisor's behavior in Example 5 depends partly on promisee's behavior, and Promisee's behavior is unverifiable. Consequently, imposing a legal duty on

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[10] The burden of an employee to reasonably mitigate damages extends to the efforts of searching a new job, but not to the final decision whether to take the job. See *Shirley Maclaine Parker v. Twentieth Century-Fox Corp.* 474 P. 2d 689 (Cal. 1970).

Promisee to assist performance and restrain reliance is ineffective, regardless of whether its form is a comparative negligence rule[11] or a term in the contract.

IV. Anti-Insurance for Gains

Having discussed anti-insurance for losses, now we turn to anti-insurance for gains.

Example 6: Agency Contract – Principal and Agent need each other's cooperation and effort to sell business computers. Agent must locate interested buyers, and Principal must negotiate and tailor the contract to the buyers' needs. Total sales depend upon effort and luck. The current contract requires Principal to give 50% of profits from sales to Agent.[12] To have full incentives for effort by both parties, Agent must receive 100% of value created by a sale and Principal must also receive 100%. The parties buy anti-insurance to produce this result. Principal and Agent pay Anti-insurer a fixed sum in advance of sales, and the Anti-insurer matches dollar for dollar the revenue from sales. By matching all profits, Anti-insurance doubles the Principal and Agent's earnings.

In this example, the Third Party contract enables the Principal and Agent to achieve double entitlement for gains, as required for efficient incentives. Because the Principal and Agent each internalize the entire profits from sales, they work harder and profit increase. Because profits increase, they can pay the anti-insurer enough in advance so that everyone benefits.

Here is another example pertinent to legal practice.

Example 6: The Law Firms. Two law firms work together for the plaintiff on a bodily injury case. Firm A is responsible for proving liability and Firm B is responsible for establishing damages. If they both exert optimal effort and win the case, their joint gains will be 200, which they will split equally. If both of them exert optimal effort, the probability of winning 200 is .25. So, with optimal effort, each firm expects to win 25. Both firms realize that the other firm will not invest in the case more than *its* expected gain of 25. To maximize joint payoffs, however, each firm should invest in the case as if its expected gain were the expected joint gain of 50. The problem is that each firm externalizes half of the benefit associated with its investment in the case. Both firms know that their behaviors are not observable or verifiable. To solve the problem, the two firms buy anti-insurance for gains. If they win the case, the anti-insurer adds 200 to the gain of 200, so *each*

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[11]   For the application of comparative negligence rule in contracts in general, and in cases analogous to Example 5 in particular, see *infra*.

[12]   Cf. *Wood v. Lucy, Lady Duff-Gordon* 118 N.E. 214 (N.Y. 1917).

firm receives 200. In exchange, the two firms pay the anti-insurer 50 in advance (assuming zero transaction cost).

In Example 6, anti-insurance for gains solves an incentive problem involving teamwork. Anti-insurance for gains is especially attractive in situations of cooperative ventures, when both parties' behavior is unobservable and unverifiable, and when the surplus of the two parties is dependent upon their cooperation. (Note that anti-insurance can completely solve the incentive problem that contingent fees partially solve.[13])

Will anti-insurance for gains actually work in the real world? Part II explains the variables that affect the feasibility of anti-insurance for losses. These same variables affect the feasibility of anti-insurance for gains. Instead of discussing all of them, we focus on the most important. In analyzing anti-insurance for losses, the victim's reporting problem formed a major obstacle. Recall the problem is that the victim may under-report his losses to the anti-insurer. An analogous problem arises for gains. Here the problem is that the two cooperators may over-report their gains. They have an obvious incentive to do so since the anti-insurer matches the gains that they enjoy. This is the *beneficiary's reporting problem* with anti-insurance for gains.

Another problem is that the anti-insurance for gains creates an incentive for the cooperators to make side payment to induce excessive exertion. By making side payments to induce excessive exertion, the cooperators can transfer wealth from the anti-insurer to themselves. To illustrate by Example 6, Firm A and Firm B expect to receive money from the trial judgment, which we call the "product," and money from the anti-insurer, which we call the "transfer." Being rationally self-interested, Firm A works until another $1 worth of its exertion causes an increase of $1 in its expected payoff. This exertion by A also causes an increase of $1 in Firm B's expected payoff. Half of the joint gain of $2 comes from production and half comes from transfer. Since Firm A's effort costs $1 and produces $1, Firm A's effort is efficient. However, Firm B has an incentive to make a side payment to

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[13] Contingent fees often pay the plaintiff's attorney approximately 30% of the judgment. If the judgment requires cooperation of the plaintiff and his attorney, then optimal incentives require double entitlements for gains. To achieve optimal incentives, the plaintiff's lawyer should receive 100% of the judgment and the anti-insurer should pay the plaintiff an amount equal to the judgment.

induce even more effort from Firm A. By doing so, Firm B can cause the anti-insurer to transfer more money to Firms A and B. To prevent side payments, the anti-insurer's contract will prohibit them. In addition, the inability of each party to observe the other's effort will also inhibit side payments for effort.

Another problem concerns pricing. With anti-insurance for losses, the anti-insurer has to figure out how much to pay the victim for the liability rights. With anti-insurance for gains, the anti-insurer has to figure out how much to charge the cooperators for giving them entitlement rights.   As with insurance, the pricing of anti-insurance is a difficult institutional and actuarial problem. Without a large volume of sales, the transaction costs of anti-insurance for gains may be prohibitive.

V. Choosing Between Anti-Insurance for Gains and Losses

Public finance economists recognize that taxes and subsidies can achieve identical incentive effects in principle, although they differ sharply in fact. The same is true of anti-insurance for losses and gains. In general, for each anti-insurance contract for gains there corresponds an anti-insurance contract for losses with the same incentive effects, and vice versa. We will illustrate the correspondence by the numerical example in Part I. In this example, the promisee transfers his liability rights to the anti-insurer. This change secures double liability as required for efficient incentives. Now suppose now that the parties want to scrap anti-insurance for losses and replace it with anti-insurance for gains. Rather than transferring the promisee's liability rights to the anti-insurer, the parties agree to extinguish the promisee's liability rights. After extinction, the promisor has no liability for non-performance. Next the Anti-insurer agrees to pay the promisor $1 for every $1 in value that performance creates for the promisee. This change secures double entitlement as required for efficient incentives. Specifically, in case of performance the promisee will receive 100 from performance and the promisor will receive 100 from the anti-insurer. In case of nonperformance, damages will not be paid to anyone.

Anti-insurance for losses and gains require different kinds of information. To see why, first consider anti-insurance for losses. If the promisor fails to perform, then anti-insurance for losses requires setting damages equal to the difference between the promisee's actual position and the position that the promisee would have been in if the

promisor had performed. Thus anti-insurance for losses requires the anti-insurer to know how much the promisee would have gained from performance.

Next, consider anti-insurance for gains. If the promisor performs, then anti-insurance for gains requires the anti-insurer to match the promisee's gain. Thus anti-insurance for gains requires the anti-insurer to know how much the promisee actually gained from the contract. Now we can state the difference between the two kinds of anti-insurance. In general, anti-insurance for losses requires the anti-insurer to know how much the promisee would have gained from performance that did not occur, whereas anti-insurance for gains requires the anti-insurer to know how much the promisee actually gained from performance that did occur. Thus anti-insurance for losses is more feasible if the anti-insurer knows how much the promisee will gain from performance, and anti-insurance for gains is more feasible if the anti-insurer can know how much the promisee actually gained from performance that did occur.

VI. Anti-insurance vs. Other Legal Devices

Without anti-insurance, the law has some mechanisms to give incentives to the promisee without eroding the promisor's incentives. We will discuss mitigation of damages, foreseeability of damages, comparative negligence, and liquidated damages. All of these mechanisms are deficient.

According to the mitigation of damages rule, the breaching party is not liable for the damages that could have been reasonably mitigated by the aggrieved party. The promisee thus bears the burden of mitigating. Mitigation of damages can only occur after the promisee knows that a breach occurred.[14] Before breach, more reliance by the promisee increases the damage that breach will cause. The burden of mitigation does not extend forward in time to encompass reliance. Consequently, the burden of mitigation cannot solve incentive problems concerned with reliance.

Contract law has not developed a duty of reasonable reliance or a burden of unreasonable reliance. Rather, contract law has developed the doctrine that plaintiffs are entitled to the foreseeable losses caused by breach. The burden of unforeseeable losses falls on the promisee unless he can shift them by giving notice to the promisor. This

doctrine, which offers some restraint on reliance, stops far short of providing optimal incentives for reliance.

The comparative fault defense, which is very narrowly recognized by American law in the realm of contract law, works differently.[15] Under the comparative negligence rule, over-reliance before breach or unreasonable failure to assist the promisor in performance may reduce damages from breach.[16] This defense suffers however from two main drawbacks that make it inferior to anti-insurance. First, it is effective only when the behaviors of both parties are observable and verifiable. When this is not the case it could hardly supply efficient incentives to the parties. As we have shown, anti-insurance is especially attractive in cases when the promisee's (or both parties') behavior(s) is neither

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[14]   E. Allan Farnsworth, *Contracts* (1999).

[15]   Although it gained some recognition in warranty cases, probably because of their affinity to tort cases. *See* White & Summers, *supra* note*., ibid.*

[16]   For comparative negligence in contracts, and for various attitudes toward it in various jurisdictions, see Ariel Porat, "Contributory Negligence in Contract Law: Toward a Principled Approach" 28 *U. B. C. L. Rev.* 141 (1994). For comparative negligence in torts, see Robert Cooter & Tom Ulen, "An Economic Case for Comparative Negligence" 61 *N.Y.U. L. Rev.* 1067 (1986).

For a comparative negligence approach in contracts , see *S.J. Groves Co. v. Warner Co.* 576 F. 2d 524 (3d Cir. 1978). Groves was a subcontract for the replacement of a bridge's concrete decks parapets. Groves contracted with Warner for the delivery of concrete to the site. Because of defaults of Warner in performance Groves had to remove and replace defective slab from the site. Groves sued Warner for his losses. It was proved that Groves's crew also functioned inefficiently and weather conditions were extremely unfavorable. The district court found Werner liable for breach of contract, but award Groves only for one-fourth of the losses associated with the slab. The Federal Court of Appeal for the 3rd Circuit affirmed the trial court decision, reasoning that since both parties contributed to the loss "… The action of the trial judge in dividing the loss between the parties was a fair solution to a difficult problem…". For another case of the same type, see *Lesmeister v. Dilly* 330 N.W. 2d 95 (Minn. 1983).

Under certain circumstances non-disclosure of information during performance can also be regarded as comparative negligence, which may reduce damages from breach. Generally, courts are not willing to recognize one party's implied duty to provide the other with information during the performance of the contract. H. Collins, "Implied Duty to Give Information During Performance of Contracts" (1992) 55 *M.L.R.* 556. Cf: *Bank of Nova Scotia v. Hellenic Mutual War Risks Association (Bermuda) Ltd, The Good Luck* [1989] 3 All E. R. 628, 664 *et seq.* (England, C.A.).

observable nor verifiable. Second, comparative negligence rule gives efficient incentives to both parties when precautions are continuous, but not binary. In contracts, precautions are often binary.[17]

Another solution available in contract law is liquidated damages, which stipulate damages that the promisor must pay the promisee for breach, regardless of the magnitude of the promisee's actual loss. If liquidated damages equal the expected damages of breach, the promisor has efficient incentives to perform. At the same time, the promisee has efficient incentives to restrain reliance and mitigate damages. Practical problems aside,[18] the liquidated damages mechanism has a serious defect in theory: it erodes the promisee's incentives to assist the promisor to perform.

Like anti-insurance, non-legal sanctions often extract a price from the promise-breaker without giving damages to the victim. Another way to improve the promisee's incentives is for the court to deduce non-legal sanctions from damages owed by the promisor. We will not pursue this possibility further in this paper, because courts have not adopted this practice.[19]

The inadequacy of these legal mechanisms to solve the incentive problems of promisor and promisee leave wide scope for the development of anti-insurance.

VII. Extensions

Until now we discussed possible markets for anti-insurance. Now we discuss its possible replacement of some mandatory legal rules.

The law typically imposes strict liability for bodily injuries caused by defective consumer products. Strict product liability improves manufacturers' incentives and erodes consumers' incentives to take care.[20] In situations where consumers significantly reduce their care, the law could allow manufacturers to substitute anti-insurance for strict product liability. Specifically, law would transfer the liability rights of consumers to anti-insurers,

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[19]   Cooter & Porat, *supra* note.

[20]   Strict Product liability also creates adverse selection problems: G. Priest, "The Current Insurance Crisis" 96 *Yale L. J.* 1521 (1987).

and in exchange the anti-insurers would pay a fixed fee to consumers. When a defective product harmed a consumer the manufacturers would pay compensatory damages to the anti-insurer. Anti-insurance would restore incentives for care by consumers, without eroding incentives for care by manufacturers.

In addition, anti-insurance for consumer product injuries would solve an insurance problem. People need insurance against medical costs and lost wages resulting from bodily injuries. However, people do not need insurance against pain and suffering.   According to Viscusi's data, pain and suffering decreases the marginal utility of money, so insuring against pain and suffering is irrational.[21] No one buys pain and suffering insurance in the private market. In contrast, by awarding damages for pain and suffering, the tort system over-insures potential victims.[22] Anti-insurance for the pain and suffering component of damages would eliminate this over-insurance. Instead of receiving money that is not needed when a person suffers pain, every uninjured person could receive a payment from the anti-insurer in exchange for the liability right. (In these circumstances, anti-insurance is a form of the "market for unmatured torts claims," or UTCs.[23])

Now we turn from consumer product injuries to implied warranties. Sometimes the law reads a warranty into a contract regardless of whether or not the parties agreed to it, as with the implied warrant of merchantability in consumers' transactions.[24]   Often the law does not allow the parties to get rid of an implied warranty. The law should sometimes allow sellers to substitute anti-insurance for implied warranties. Specifically, the law should allow substitution in cases where the implied warranty significantly erodes the promisee's incentives.

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[21]   Viscusi.

[22]   *Cf.* S. A. Rea, "Non-Pecuniary Loss and Breach of Contract" 11 *J. Leg. Stud.* 35 (1982).
An exception, which can be explained, is uninsured motorist insurance, which typically gives the insured the right to recover damages, including pain and suffering, caused by an uninsured motorist.

[23]   R. D. Cooter, "Towards A Market in Unmatured Tort Claims" 75 *Va. L. Rev.* 383 (1989); R. Cooter (1998) "Liability Rights As Contingent Claims" M. M. P. N. John Eatwell., "Commodifying Liability" The Fall and Rise of Freedom of Contract (Durham, NC, Duke University Press, 1999, edited by Frank Buckley) 139.

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Conclusion

Insurance transfers risk from the victim to the insurer. Total risk increases because the victim has less incentive to prevent harm. We propose a novel contract called anti-insurance that reverses insurance. Anti-insurance transfers the right to damages from the victim to the anti-insurer. Total risk decreases because the victim has more incentive to prevent the harm. Just as the victim pays the insurer to assume risk, so the anti-insurer pays the victim for the right to damages.

Do legal obstacles obstruct the development of anti-insurance? We can think of two possible legal objections. First, anti-insurance might be regarded as a kind of penalty clause in a contract. In fact, anti-insurance does not involve penalties in any sense: the breaching party pays damages for the losses he caused, no more and no less. The aggrieved party is not compensated, because he assigned his compensation rights to a third party, which contract law allows. Second, anti-insurance might be regarded as form of gambling contract that is unenforceable on grounds of public policy. In fact, the anti-insurer is not a gambler any more than an insurance company is a gambler. The anti-insurer supplies a service and gets paid by assignments of liability rights. Anti-insurance advances an important policy goal, which is increasing the value of contracts.

If there are no legal obstacles, why are there no anti-insurance markets? Perhaps the history of insurance provides the answer. Most forms of contemporary insurance were unknown in the 19th century. For these forms of losses, people in the 19th century presumably were just as risk averse as people in the 20th century. There is little reason to think that risk spreading became more valuable to people and they were willing to pay more for it. Instead, the difference must be the invention of institutional mechanisms that lowered the cost of insurance. In reality, insurance markets are fragile because they are so susceptible to abuse. Institutional innovations overcame these problems. Specifically, insurers developed better actuarial methods to price insurance, a wider market reduced transaction costs, and insurers developed better methods to limit the destructive scope of moral hazard and adverse selection.

Similarly, there is good reason to think that people could increase the value of contracts by concentrating risk and improving promisee's incentives. But anti-insurance markets are fragile and susceptible to abuse. Anti-insurance waits for better actuarial

method to price anti-insurance, a wide market to reduce transaction costs, and good methods to solve the victim's reporting problem. Working out the institutional forms will take time. Perhaps the necessary institutional innovations will appear in the 21st century. In any case, the prospects for anti-insurance markets will improve substantially after more people appreciate the concept.