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Articles

On the Genealogy of Moral Hazard

Tom Baker*

Much of our current legal and political debate addresses a familiar question: To what extent are those who suffer responsible for their condition? In such diverse contexts as welfare reform, tort liability, workers' compensation, and health policy, we debate this question and a corollary: What obligations do we have to prevent or alleviate the suffering of others? (And, who are "we"? Who is "other"?)

In the legal academy and elsewhere, these questions increasingly are debated within the framework of what in law schools is called law and economics analysis (and elsewhere is called rational choice theory, neoclassical economics, or, sometimes, simply policy analysis). Within that framework, the concept of "moral hazard" is one of the most important, and least well understood, of the analytical tools applied to these and other social responsibility questions. Whether the topic is products liability law, workers' compensation, welfare, health care, banking regulation, bankruptcy law, takings law, or business law, moral hazard is a central part of the law and economics explanation of how things as they are came to be.¹

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1. See, e.g., WILLARD G. MANNING & M. SUSAN MARQUIS, *RAND CORPORATION, HEALTH INSURANCE: THE TRADEOFF BETWEEN RISK POOLING AND MORAL HAZARD* (1989); STEVEN SHAVELL,

Perhaps the best way to illustrate the ubiquity of the moral hazard lens on social responsibility is to note its presence on the op-ed page in Middle America, where one writer succinctly described the "lesson of moral hazard" as follows:

What moral hazard means is that, if you cushion the consequences of bad behavior, then you encourage that bad behavior. The lesson of moral hazard is that less is more.²

As this passage reflects, the conventional lesson taken from the economics of moral hazard is that "less is more": Less welfare means more Americans out of poverty; less products liability means safer homes; less workers' compensation means safer workplaces; less disability insurance means more people without disabilities; and less health insurance means more healthy people.

This Article questions this extraordinarily counterintuitive (and, I will assert, largely counterfactual) "less is more" lesson by investigating the genealogy of moral hazard: what Nietzsche would have called the "cause of the origin of" moral hazard as well as "its eventual utility."³ In the

ECONOMIC ANALYSIS OF ACCIDENT LAW 21, 26 (1987) (tort law and moral hazard); RICHARD E. WAGNER, TO PROMOTE THE GENERAL WELFARE: MARKET PROCESSES VS. POLITICAL TRANSFERS 164-70 (1989) (transfer payments and moral hazard); James R. Barth et al., *Moral Hazard and the Thrift Crisis: An Empirical Analysis*, 44 CONSUMER FIN. L.Q. REP. 22 (1990) (banking regulation and moral hazard); Lawrence Blume & Daniel Rubinfeld, *Compensation for Takings: An Economic Analysis*, 72 CAL. L. REV. 569 (1984) (takings law and moral hazard); Richard J. Butler & John D. Worrall, *Claims Reporting and Risk Bearing Moral Hazard in Workers Compensation*, 58 J. RISK & INS. 191, 202 (1991) (workers' compensation and moral hazard); Richard A. Epstein, *Products Liability as an Insurance Market*, 14 J. LEG. STUD. 645, 666 (1985) (products liability and moral hazard); Jon D. Hanson & Kyle D. Logue, *The First-Party Insurance Externality: An Economic Justification for Enterprise Liability*, 76 CORNELL L. REV. 129, 137-41 (1990) (products liability and moral hazard); Howell E. Jackson, *The Expanding Obligations of Financial Holding Companies*, 107 HARV. L. REV. 509, 512 (1994) (banking regulation and moral hazard); Daniel Keating, *Pension Insurance, Bankruptcy and Moral Hazard*, 1991 WIS. L. REV. 65, 67-78 (pension regulation, bankruptcy, and moral hazard); Reinier H. Kraakman, *Corporate Liability Strategies and the Costs of Legal Controls*, 93 YALE L.J. 857, 873-74 (1984) (business law and moral hazard); Mancur Olson, *A Less Ideological Way of Deciding How Much Should Be Given to the Poor*, DAEDALUS, Fall 1983, at 217 (welfare and moral hazard); George L. Priest, *A Theory of the Consumer Product Warranty*, 90 YALE L.J. 1297, 1313-14 (1981) (products liability and moral hazard).

2. James K. Glassman, *Drop Budget Fight, Shift to Welfare*, ST. LOUIS POST-DISPATCH, Feb. 11, 1996, at B3. *The Detroit News* captioned its editorial on the Million Man March, *Moral Hazards: In Washington . . .*, and wrote:

Mr. Farrakhan is right when he argues that the black man has suffered a kind of oppression. But the oppression in Washington comes from too much government, not too little. It comes from policies that punish success and reward failure. If the Washington marchers really want to inaugurate a new era of unity and prosperity, they should seek policies that are consistent with their rhetoric about taking personal responsibility for their lives. That means reforms which reduce dependence on government rather than increase it.

Moral Hazards: In Washington . . ., THE DETROIT NEWS, Oct. 15, 1995, at 12A.

3. FRIEDRICH NIETZSCHE, ON THE GENEALOGY OF MORALS 77 (Walter Kaufmann trans., Vintage Books 1967) (1887). By "cause of the origin" of a phenomenon, Nietzsche means to focus on the con-

economics literature and in the law and policy debate that draws upon this literature, “moral hazard” refers to the tendency for insurance against loss to reduce incentives to prevent or minimize the cost of loss.⁴ Within this framework, welfare can be understood as insurance against being without a job or other source of economic support, workers’ compensation as insurance against work-related injury, and products liability as insurance against product-related injury. Because all insurance affects incentives to reduce loss, welfare will increase poverty, workers’ compensation will increase worker accidents, and products liability will increase consumer accidents. This is the “moral hazard” of welfare, workers’ compensation, and products liability. It is backed up by an impressive array of mathematical proofs and solutions; and it is the intellectual backbone of the effort to cut back products liability law, reduce workers’ compensation, and “end welfare as we know it.”

Appearances to the contrary, moral hazard has never been a straightforward, purely logical or scientific concept. It had a nonrational, performative dimension for the nineteenth-century insurers who coined the term, just as it does today. In the nineteenth century, addressing moral hazard signified the morality of the insurance enterprise at a time when that morality was in substantial doubt; the concept of moral hazard also helped deny that insurance broke with conventional morality, even as insurance practices began to replace individual responsibility with social responsibility.

Today, moral hazard signifies the perverse consequences of well-intentioned efforts to share the burdens of life, and it also helps deny that refusing to share those burdens is mean-spirited or self-interested. Indeed, using the economics of moral hazard, it is but a short step to claim, in one

ditions in which the phenomenon arose and to understand those conditions as they were. Nietzsche emphasizes that “the cause of the origin of a thing and its eventual utility, its actual employment and place in a system of purposes, lie worlds apart; whatever exists, having somehow come into being, is again and again reinterpreted to new ends . . .” *Id.*

4. The leading articles setting out the economics of moral hazard include: Kenneth J. Arrow, *Uncertainty and the Welfare Economics of Medical Care*, 53 AM. ECON. REV. 941 (1963) [hereinafter Arrow, *Uncertainty*]; Mark V. Pauly, *The Economics of Moral Hazard: Comment*, 58 AM. ECON. REV. 531 (1968) [hereinafter Pauly, *Comment*]; Kenneth J. Arrow, *The Economics of Moral Hazard: Further Comment*, 58 AM. ECON. REV. 537 (1968) [hereinafter Arrow, *Further Comment*]; Richard Zeckhauser, *Medical Insurance: A Case Study of the Tradeoff Between Risk Spreading and Appropriate Incentives*, 2 J. ECON. THEORY 10 (1970); Isaac Ehrlich & Gary S. Becker, *Market Insurance, Self-Insurance and Self-Protection*, 80 J. POL. ECON. 623 (1972); Mark V. Pauly, *Overinsurance and Public Provision of Insurance: The Roles of Moral Hazard and Adverse Selection*, 88 Q.J. ECON. 44 (1974); John M. Marshall, *Moral Hazard*, 66 AM. ECON. REV. 880 (1976); Steven Shavell, *On Moral Hazard and Insurance*, 93 Q.J. ECON. 541 (1979); Bengt Holmström, *Moral Hazard and Observability*, 10 BELL J. ECON. 74 (1979); and Joseph E. Stiglitz, *Risk, Incentives and Insurance: The Pure Theory of Moral Hazard*, 8 GENEVA PAPERS ON RISK & INS. 4 (1983). There are many more recent contributions to the literature, some of which will be referred to in Part II of this Article. See *infra* notes 181, 183, 186, & 202.

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economist-politician's memorable words, that "[s]ocial responsibility is a euphemism for individual irresponsibility."⁵ By "proving" that helping people has harmful consequences, the economics of moral hazard justify the abandonment of legal rules and social policies that try to help the less fortunate; and, by providing a "scientific" basis for the abandonment of legal rules and social policies, the economics of moral hazard legitimate that abandonment as the result of a search for truth, not an exercise of power.

In that sense, the cultural meaning of moral hazard has come full circle—from legitimating the expansion of redistribution in the nineteenth century to limiting that redistribution today. Yet, conventional economic accounts of moral hazard exaggerate the incentive effects of real-world insurance and, at the same time, underestimate the social benefits of insurance. As a result, the economics of moral hazard systematically—and wrongly—undervalue efforts to protect the injured, the sick, and the poor, and absolve the more fortunate of their responsibility for that situation. The real lesson of moral hazard should be that the world is a relational web that cannot be reduced to truisms—not the op-ed writer's "less is more" and not the "insurance-deterrence" tradeoff of the economist's theoretical model.⁶

Part I of this Article describes the origin of the concept of moral hazard in the nineteenth-century fire insurance trade, where it grew from seeds planted in probability theory and marine insurance.⁷ Like the concept of moral hazard today, the nineteenth-century concept of moral hazard had both a technical meaning and a larger cultural significance. For nineteenth-century insurers, "moral hazard" represented an unwholesome mix of bad character and temptation which the insurers had a responsibility to ferret out from the insurance enterprise.⁸ The concept's significance lay not in the recognition that insurance could have undesirable consequences (which was widely believed at the time),⁹ but instead in the claim that the undesirable consequences could be controlled.

To control these undesirable consequences, insurers would do two things. They would refuse to insure "moral hazards"—that is, people with

5. DICK ARMEY, *THE FREEDOM REVOLUTION* 317 (1995); see also David S. Broder, *ArmeY's Axioms*, WASH. POST, June 21, 1995, at A21 (reviewing *THE FREEDOM REVOLUTION*, *supra*, and reporting that Mr. ArmeY, the U.S. House of Representatives Majority Leader and co-author of the Contract with America, holds a doctoral degree in economics).

6. See, e.g., Stiglitz, *supra* note 4, at 6 ("[T]he more and better insurance that is provided against some contingency, the less incentive individuals have to avoid the insured event, because the less they bear the full consequences of their actions.")

7. See *infra* subparts I(A-B).

8. See *infra* subpart I(C).

9. See VIVIANA A. ROTMAN ZELIZER, *MORALS AND MARKETS: THE DEVELOPMENT OF LIFE INSURANCE IN THE UNITED STATES* 45, 42-46 (1979) (documenting nineteenth-century resistance to the life insurance industry for transforming "man's sacred life" into an article of merchandise).

bad characters. And they would structure the insurance contract so that it did not create a “moral hazard”—that is, so that insurance did not encourage the wicked to apply or tempt good people to do wrong. Together, these efforts helped to exorcise the specter of immorality from the insurance trade and facilitated the late nineteenth-century transformation of insurance to a mass consumer enterprise.¹⁰

Part II begins by describing how neoclassical economists adopted and transformed the insurance trade concept of moral hazard. Against the insurers’ claim that they could eliminate the immoral from insurance, the economists’ models demonstrated, instead, that insurance inevitably increases the occurrence, magnitude, or cost of that which is insured against. Economists dispensed with the insurers’ notion of “character” and changed the theologically loaded “temptation” into an insurance “incentive.”¹¹ In the process, economists generalized the concepts of “insurance” and “moral hazard” so that they could be seen, not only in relationships with traditional insurance institutions such as insurance companies and the Social Security Administration, but in all relationships involving risk.¹² Indeed, through the lens of neoclassical economic theory, we can see insurance and moral hazard at work in corporate organization, bankruptcy law, employment relations, the family, and even courtship relations.¹³

Part II then examines the assumptions about people and their situations reflected in the economics of moral hazard. This examination takes as a given that people act in a manner consistent with the (much-criticized) vision of rational action that undergirds law and economics analysis,¹⁴ not

10. See *infra* subpart I(D). Understanding this history is important, not only as background for the economists’ moral hazard, but also because it shows how long and consistently insurers have stereotyped outsiders and minorities. As an examination of insurance trade literature reveals, character underwriting often amounted to underwriting by stereotype. See Carol A. Heimer, *The Racial and Organizational Origins of Insurance Redlining*, 10 J. INTERGROUP REL. 42, 47, 46-47 (1982) (describing the link between character underwriting and the assumption that “immigrants and blacks were poor risks”); see also *infra* notes 80-82, 144 and accompanying text. If, as I claim, underwriting by stereotype helped to legitimate insurance as a culturally acceptable, “moral” business, then it is no wonder that insurers face claims of discrimination today. See, e.g., *Homeowners’ Insurance Discrimination: Hearing Before the Senate Comm. on Banking, Hous., and Urban Affairs*, 103d Cong., at title page (May 11, 1994) (discussing the “availability, affordability, and accessibility of homeowners’ insurance, particularly in urban neighborhoods”).

11. See *infra* subpart II(A).

12. See *infra* subpart II(B).

13. See, e.g., sources cited *supra* note 1; see also CAROL A. HEIMER, REACTIVE RISK AND RATIONAL ACTION: MANAGING MORAL HAZARD IN INSURANCE CONTRACTS 220-26 (1985) (discussing moral hazard in courtship); Richard Arnott & Joseph E. Stiglitz, *Moral Hazard and Nonmarket Institutions: Dysfunctional Crowding Out or Peer Monitoring?*, 81 AM. ECON. REV. 179 (1991) (discussing “non-market” insurance such as support from family and friends in the context of moral hazard).

14. By “rational action” or “rational choice,” economists mean “that man is a rational maximizer of his ends in life.” RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 3 (4th ed. 1992) (citation omitted). For sympathetic discussions of the limits of the rational actor assumption and an introduction

because I agree that this assumption reflects how people actually behave, but rather to focus attention on other assumptions built into the economists' moral hazard model. As Part II will discuss, the situations in which we act often conflict with these other assumptions. For example, the moral hazard model assumes that money fully compensates for loss, that individuals are in control of loss-producing behavior, and that insurance institutions do not ameliorate the incentive effects of insurance.¹⁵ In the context of workplace and products injuries (as well as other situations I will explore), these assumptions plainly are not met. The moral hazard model's failure to consider and address adequately these assumptions explains how the economics of moral hazard have been deployed in a fashion that systematically favors the interests of manufacturers and employers over the sick and the injured.

Part II then reviews the empirical support for the economists' moral hazard model. As the empirical literature suggests, the predictive capacity of the model varies according to the degree to which the underlying assumptions are met in the particular circumstances under review. The economic model rests on firmer ground for some phenomena lumped under the label "moral hazard" than it does for others lumped under that label. The empirical literature confirms, for example, the common sense prediction that the existence of insurance will have a greater effect on what people do to recover from loss than what they do to prevent loss.¹⁶ Thus, having health insurance may not make us more sick,¹⁷ but it may well mean that we go to the doctor more often.¹⁸

Part II concludes by examining why the rhetorical valence implicit in the name "moral hazard" can be troubling even in circumstances in which we might agree that insurance changes behavior. What, after all, is wrong with enabling people to go to the doctor when they feel the need, and why should we be concerned when they do so? The economics of moral hazard can tell us only that providing insurance for medical expenses, or time off from work to recover from injury (or any other activity), may increase the frequency of these activities in the absence of countervailing forces. The

to relevant literature, see DOUGLASS C. NORTH, INSTITUTIONS, INSTITUTIONAL CHANGE AND ECONOMIC PERFORMANCE 17-18 (1990); Melvin Aron Eisenberg, *The Limits of Cognition and the Limits of Contract*, 47 STAN. L. REV. 211, 213-25 (1995); and Robert C. Ellickson, *Bringing Culture and Human Frailty to Rational Actors: A Critique of Classical Law and Economics*, 65 CHI.-KENT L. REV. 23 (1989). For a decidedly unsympathetic perspective, see PIERRE BOURDIEU & LOÏC J.D. WACQUANT, AN INVITATION TO REFLEXIVE SOCIOLOGY 125, 126, 124-26 (1992) (describing the rational action theory as "anthropologically false" and "absurd").

15. See *infra* subpart II(C).

16. See *infra* subpart II(D).

17. But see IVAN ILLICH, MEDICAL NEMESIS: THE EXPROPRIATION OF HEALTH 11 (1975) (arguing that "[t]he medical establishment has become a major threat to health").

18. See Willard G. Manning et al., *Health Insurance and the Demand for Medical Care: Evidence From a Randomized Experiment*, 77 AM. ECON. REV. 251, 258-59 (1987) (concluding that people are more likely to use medical services when their out-of-pocket expenditures for such services are lower).

economics cannot tell us whether countervailing forces exist or, in many cases, whether increased consumption of medical or other services is a good or bad thing. That is because the economics of moral hazard ignore the larger social benefits of insurance, what economists would call “positive externalities.”¹⁹

Moreover, even if we agree with the economists that insurance creates an incentive to increase the consumption of health care or paid time off from work, that does not necessarily mean that we should reduce the benefits provided through health plans, workers’ compensation, products liability, or other forms of insurance. Other ways to address this “moral hazard” exist which are hidden by the assumption that individuals have control over their situations. Institutions, for example, can and do affect what we do to recover from injury or sickness, as the wave of “managed care” sweeping across American health care demonstrates.²⁰ Indeed, as research by the sociologist Carol Heimer and others has shown, much of insurance practice can be understood as an effort to manage and control insurance incentives.²¹

What all this means is that “the lesson of moral hazard” does not provide a neutral, technical basis for reforming tort law, workers’ compensation, health insurance, or social welfare programs. On purely technical grounds, the economics of moral hazard are incomplete because by assuming that individuals are in control of their situations, the economics ignore institutional control over what people do to prevent or minimize the cost of loss.²² Moreover, even if the economics were not incomplete in that sense, they still could not tell us whether the behavior they predict is harmful, beneficial, or simply inconsequential in light of other values promoted or benefits provided by the legal rule or policy choice in question.

As applied, the economics of moral hazard have systematically undervalued efforts to protect the injured, the sick, and the poor. Further, by encouraging us to assume that the injured, the sick, and the poor are in control of themselves and their situation, the economics of moral hazard

19. See *infra* section II(D)(3).

20. For an early account of how prepaid health plans reduced the cost of health care by controlling patient choice and physician discretion and by substituting nurses and physicians’ assistants for physicians, see PAUL STARR, *THE SOCIAL TRANSFORMATION OF AMERICAN MEDICINE* 383 (1982). See also *infra* notes 207-10 and accompanying text.

21. See HEIMER, *supra* note 13, at 11-17 (incorporating the notion of incentives in a description of four general principles governing insurance practices); see also *infra* note 206.

22. Coase and North have made similar, more general criticisms of neoclassical economics generally. See R. H. COASE, *THE FIRM, THE MARKET, AND THE LAW* 5 (1988) (positing that modern economic theory has neglected to make institutional entities themselves the subject of investigation and analysis); NORTH, *supra* note 14, at 20 (suggesting that a rational choice model of human behavior in an institutional context cannot account for the complexity of human decisionmaking).

have helped to absolve the rest of us of our responsibility for that situation. In this manner, the economics of moral hazard work to convince us that, however well intentioned, social responsibility is a bad thing. This “eventual utility” of the concept of moral hazard represents quite a change from the nineteenth century, when the moralizing in moral hazard helped to establish two crucially important forms of social responsibility—fire and life insurance—as very good things.

I. Origins

The beginning point of any genealogy is necessarily an arbitrary one. This genealogy will begin with the origins of the word “hazard,” which was an important insurance word long before it was paired with the word “moral.” After describing the place of “hazard” in the insurance trade, I will describe when and how the pairing of “moral” and “hazard” took place, what it was that the resulting “moral hazard” was understood to mean, and what may have been the “utility” of that concept within the insurance trade. From there, I will race through the twentieth century to the 1960s when Nobel prize winning economist Kenneth Arrow imported the insurance concept of moral hazard into neoclassical economic theory.

A. *Hazard*

The early meanings of the word “hazard” only infrequently are remembered. Today we think mainly of physical danger—safety hazards, product hazards, hazardous waste. The word’s origins, however, point to danger of a moral kind, or at least to something that Victorians (and quite a few people today) would regard as morally hazardous: gambling. The Oxford English Dictionary reports that the English “hazard” entered Old English from the Old French “hasard” or “hasart” following the Norman conquest.²³ At that time, “hasard” or “hasart” (later, “hazard”) was the name given to “a game at dice in which the chances are complicated by a number of arbitrary rules.”²⁴

As late as the mid-nineteenth century, the dice game Hazard was a staple in both England and the United States.²⁵ An 1860 edition of *The Handbook of Games* declared, “Hazard is and has been longer, we may say, a standing game at all the houses of play in Great Britain.”²⁶ Since

23. 7 OXFORD ENGLISH DICTIONARY 31-32 (2d ed. 1989) [hereinafter OED].

24. *Id.* The OED reports that the word and the game originated in Arabic and that “[a]ccording to William of Tyre, the game took its name from a castle called *Hasart* or *Asart* in Palestine, during the siege of which it was invented.” *Id.* at 31.

25. HERBERT ASBURY, *SUCKER’S PROGRESS: AN INFORMAL HISTORY OF GAMBLING IN AMERICA FROM THE COLONIES TO CANFIELD* 45 (1938).

26. *THE HAND-BOOK OF GAMES* 352 (Henry G. Bohn ed., 1860).

then, the complicated hazard has been overtaken by a simple version of the game—craps²⁷—that is still enormously popular today.

The OED's earliest English sources use the word "hazard" to refer to the dice game, and "hazarder" as someone who plays it.²⁸ Sixteenth-century sources mark a significant transition in the use of the word: from the name of a game, to a metaphor using the game, to a synonym for the "chance" that pervades the game. For example, at the conclusion of *Richard III*, King Richard cries:

I have set my life upon a cast,
And I will stand the hazard of the die.
I think there be six Richmonds in the field;
Five have I slain to-day, instead of him.
A horse! a horse! my kingdom for a horse!²⁹

27. According to a mid-nineteenth century American source, "craps" was first popularized in America in New Orleans in the early nineteenth century. See J.H. GREEN, *AN EXPOSURE OF THE ARTS AND MISERIES OF GAMBLING* 88-89 (1843). The game "craps" takes its name from the term "crap" referring to dice combinations which, when thrown, cause the caster to lose the turn at the dice (and the money staked). See R.F. FOSTER, *FOSTER'S COMPLETE HOYLE: AN ENCYCLOPEDIA OF GAMES* 578 (1963). In Hazard, these same throws were called "crabs." The most concise description of the game of Hazard comes from *THE CENTURY DICTIONARY AND CYCLOPEDIA*:

The instruments are a box and two dice. The players are a caster and any number of setters. The setter stakes his money upon the table; the caster accepts the bet if he chooses, and must cover the setter's money if required. The setter can bar any throw. The caster first calls a main—that is, he calls any of the numbers 5, 6, 7, 8, or 9. He then throws his chance. If this is 2, 3, 11, or 12, it is called *crabs* and he loses, unless the main were 7 and he throws 11, or the main were 6 or 8 and he throws 12. In these cases, and also if he throws the main, his throw is called *nick*, and he wins. If he throws neither crabs nor nick, he must continue to throw until he again throws the main [*i.e.*, the number he called] or his chance [*i.e.*, the first combination he threw]; if he throws the former first, the setter wins, if the latter the caster wins. Owing to the complicated chances, a good player at hazard has a great advantage over a novice.

4 *THE CENTURY DICTIONARY AND CYCLOPEDIA* 2745 (William Dwight Whitney ed., 1897). In French gaming houses, the British "crabs" became "craps," and that name stuck in French-speaking New Orleans, where new, simpler rules made the game accessible to those who might have been daunted by Hazard's complexity. ASBURY, *supra* note 25, at 40-48. An alternative explanation of the origin of the name "craps" appears in EDWARD LAROCQUE TINKER, *CREOLE CITY: ITS PAST AND ITS PEOPLE* 8 (1953).

28. For example, Chaucer's *Pardoner's Tale* reports:

Hasard is verray mooder of lesynges
It is repreeve and contrarie of honour
For to ben holde a commune hasardour.

GEOFFREY CHAUCER, *The Pardoner's Tale*, in *THE RIVERSIDE CHAUCER* 196, 198 at VI. 591, 595-96 (Larry D. Benson ed., 3d ed. 1987). E. Benson Perkins provides the following modernization of Chaucer's verse:

Gaming is the very mother of all lies
'Tis shameful and repugnant to honour
To be regarded as a hazarder.

E. BENSON PERKINS, *GAMBLING IN ENGLISH LIFE* 9 (1958).

29. WILLIAM SHAKESPEARE, *THE TRAGEDY OF KING RICHARD THE THIRD* act 5, sc. 4, lines 9-13 (G. Blakemore Evans ed., Penguin Books 1969).

Here is the game of hazard as an intricate metaphor in which Richard stakes his life against the crown. Five times that day the die had been cast, and every side but the one he needed had come up: five false Richmonds,³⁰ and not the true one. Now, like a true gambler, Richard wanted one last cast, to stake all that he still had—his kingdom—against nothing more (or less) than the lowly horse he needed to hazard the kingdom again.

Thus, from “hazard,” a dangerous game of chance, comes “hazard” as chance. When Samuel Johnson prepared his dictionary in the late eighteenth century, the primary definition he gave for hazard was just that: “Chance; accident; fortuitous happening.”³¹ “Chance” was strongly implicated in his remaining definitions as well: “Danger; chance of danger,” and, of course, “a game at dice,” which is to say, a game of chance.³² While not the primary sense of “hazard” today, chance remains a central element in the congeries of meanings that make up the word and distinguish “hazard” from its close cousins “risk” and “peril.”³³

B. *Insurance Hazards and the Doctrine of Chances*

To the nineteenth-century ear, the word “hazard” openly carried its dicing origins, and insurance writing from the period is full of plays on the word “hazard.”³⁴ Within insurance literature, the word also carried the close connection between the game of Hazard and the “doctrine of chances.”³⁵ In the late seventeenth century, wealthy gamblers had commissioned mathematicians such as Pascal and Galileo to calculate the complicated odds of Hazard. The calculations ripened into Pascal’s theory of probability, and from there into the doctrine of chances, the intellectual cornerstone of the nineteenth-century insurance enterprise.³⁶

30. The notes to the Penguin edition of RICHARD III for lines 9 to 13 report that dressing and arming other men to look like a leader was “a common safety measure.” *Id.* at 176.

31. 1 SAMUEL JOHNSON, *DICTIONARY OF THE ENGLISH LANGUAGE* (facsimile ed. 1990) (1755).

32. *Id.*

33. See THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 830, 1346, 1557 (3d ed. 1992) (defining hazard, risk, and peril). In French, chance remains the primary meaning of “hasard.” See 1 HARRAP’S NEW STANDARD FRENCH & ENGLISH DICTIONARY H:5 (René P.L. Ledésert & Margaret Ledésert eds., rev. ed. 1972).

34. See, e.g., CHARLES HARDWICK, THE HISTORY, PRESENT POSITION, AND SOCIAL IMPORTANCE OF FRIENDLY SOCIETIES 133 (1859) (“Mr. Finlaison’s small society won in the hazard.”).

35. See M. A. QUETELET, LETTERS ON THE THEORY OF PROBABILITIES 30 (1849) (discussing the doctrine of chances with regard to games of chance and annuities).

36. See 2 CORNELIUS WALFORD, THE INSURANCE CYCLOPEDIA 179-80 (1873) (stating in the entry under Chevalier de Méré that de Méré’s request to Pascal to solve probability problems related to dice led to the development of the doctrine of chances); see also IAN HACKING, THE EMERGENCE OF PROBABILITY: A PHILOSOPHICAL STUDY OF EARLY IDEAS ABOUT PROBABILITY, INDUCTION AND STATISTICAL INFERENCE 57-62 (1975) (describing the interactions between de Méré and Pascal which led to the emergence of the theory of probability).

In the early nineteenth century, Adolphe Quetelet and other "moral scientists" applied probability theory to vital statistics like births, marriages, and suicides and thereby proved the great intuition of marine insurance: The risks of uncertain future events could, like the odds of Hazard, be predicted in the aggregate with sufficient certainty to enable the accurate collection of money today for the costs of tomorrow.³⁷ Insurance men, the entrepreneur prophets of this "doctrine of chances," set out to make their fortunes by protecting whole populations against the terrors of chance.³⁸

There seemed to be no boundaries beyond which the insurance enterprise could not, in time, extend. As the moral scientists had taught, the doctrine of chances meant that through "persevering observation," the past could predict the future "of moral as well as of physical phenomena, of those which seem to be the result of the freest volition."³⁹ Indeed, even "the individual instances where trust is broken, and moral restraint gives way before the impulses of cupidity or the cravings of want, are susceptible of computation of a very nice average."⁴⁰

Thus, like the game of Hazard, life was viewed as a complicated game of chance, decipherable in the aggregate, and insurance was the practical science that would reorganize society around this new principle:

Insurance, therefore, takes from all a contribution; from those who will not need its aid, as well as from those who will; for it is as certain that some will not, as that some will. But as it is uncertain who will, and who will not, it demands this tribute from all to the

37. There is a very rich recent literature on the history of statistics. See, e.g., HACKING, *supra* note 36; IAN HACKING, *THE TAMING OF CHANCE* (1990). Other significant works in the field include MICHAEL J. CULLEN, *THE STATISTICAL MOVEMENT IN EARLY VICTORIAN BRITAIN* (1975); LORRAINE DASTON, *CLASSICAL PROBABILITY IN THE ENLIGHTENMENT* (1988); DONALD A. MACKENZIE & THEODORE M. PORTER, *THE RISE OF STATISTICAL THINKING 1820-1900* (1986); *THE PROBABALISTIC REVOLUTION* (Lorenz Krüger et al. eds., 1987); Geoffrey Wilson Clark, *Betting on Lives: Life Insurance in English Society and Culture, 1695-1775* (1993) (unpublished Ph.D. dissertation, Princeton University) (available through UMI Dissertation Information Service).

38. The conscious, contemporary link between insurance and the doctrine of chances is made clear in the following excerpt from an article appearing in a widely distributed mid-nineteenth century commercial journal:

All insurance, whatever its kind, or the basis on which it is practised, whether on the mutual or stock plan, whether on houses, ships, or lives, rests on the same law—the law of average. This law is the result of a science peculiar to modern times—the doctrine of chances. Modern observation has succeeded, it is believed, in detecting in the midst of the individual irregularity of those events in life which we call accidents, a prevailing general regularity running through and pervading them.

D.R. Jacques, *Society on the Basis of Mutual Life Insurance*, 16 HUNT'S MERCHANTS' MAG. 152, 153 (1849).

39. Horace Binney, Address (1850), in J.A. FOWLER, *HISTORY OF INSURANCE IN PHILADELPHIA* 393 (1888).

40. *Principles of Life Assurance*, LONDON DAILY NEWS, reprinted in 5 BANKERS' MAG. & STAT. REG. 642, 644 (J. Smith Homans ed., 1853).

uncertainty of fate. . . . From this point of view the whole beauty of the system of insurance is seen. It is from this point of view that it presents society a union for mutual aid, of the fortunate and unfortunate, where those only who need it receive aid, and those only who can afford it are put to expense. Thus, while the aggregate of human suffering and calamity remains undiminished—thus, while the uncertainty of their visitation remains unremoved—human ingenuity and cooperation equalize the distribution of this fearful aggregate, and alleviate the terrors of uncertainty.⁴¹

“Moral hazard” resonates with this moment: “hazard,” with its overtones of chance, danger, and high stakes dice games; and “moral,” from the “moral scientists” who made chaste use of the odds learned from gambling and introduced the doctrine of chances to the insurance world.⁴² What combination of words could better signify the serious, scientific, and highly proper—indeed “moral”⁴³—grounding of the insurance enterprise?

Fire insurers had long distinguished among physical “hazards,” in two senses of that word. There were hazards that caused fires (for example, lightning, short circuits, spontaneous combustion), and there were hazards that affected the probability or magnitude of loss by fire (for example, the type of construction or use of a building). In the mid-nineteenth century, fire insurers, and, later, life and other insurers, began using the adjective “moral” to modify both of these senses of “hazard.”⁴⁴ “Incendiarism,”

41. Jacques, *supra* note 38, at 158.

42. See HACKING, *supra* note 36, at 99-101 (detailing the application of the doctrine of chances to life annuity rates in the late seventeenth century). It is revealing to note that the translator of the first English translation of Quetelet's *LETTERS ON THE THEORY OF PROBABILITIES*, published in 1849, identified himself as a member of the Economic Life Assurance Society in London. See QUETELET, *supra* note 35, at title page.

43. According to the OED, both the noun and adjective “moral” come from the Latin *mor-*, *mos*, meaning custom. 9 OED, *supra* note 23, at 1068. The OED gives the first (and still primary) meaning of the adjective “moral” as:

Of or pertaining to character or disposition, considered as good or bad, virtuous or vicious; of or pertaining to the distinction between right and wrong, or good and evil, in relation to actions, volitions, or character of responsible beings; ethical.

Id. Although this definition may be problematic from a philosophical perspective, it is more than adequate for present purposes. Regardless of the equivalence or lack of equivalence of “morals” and “ethics”; or the differences among “good and bad,” “right and wrong,” and “good and evil” as fundamental opposites; or the relationship between “action,” “volition,” and “character”; there is no doubt that the word “moral” still has tremendous normative punch. What is understood to be “moral” varies with time and place, but not the normative valence of the term. “Moral” is positive—good, right, true. “Not moral” (“immoral” or “amoral” or any of the many substitutes for those words) is negative—bad, wrong, false, evil. Anyone who doubts whether this valence survived Nietzsche's problematizing of the “moral” or the Freudian account of the attractions of the “immoral” need only recall the charges and countercharges that followed Reverend Jerry Falwell's adoption of the name “Moral Majority” for his political organization in the 1980s. See *People*, TIME, Oct. 17, 1983, at 63, 63 (quoting Sen. Ted Kennedy for the proposition that “[t]he controversy about the Moral Majority arises not only from its views, but from its name”).

44. The earliest “moral hazard” usage I have found appears in an American fire insurance guide first published in 1862. See ARTHUR C. DUCAT, *THE PRACTICE OF FIRE UNDERWRITING* 164-65 (4th

fraud, and “interested carelessness” were moral hazards that caused losses.⁴⁵ Bad character or habits, financial embarrassment, poor business practices, and overinsurance were moral hazards that increased the probability of loss.⁴⁶

The moral ideal embodied in both senses of the new term could have come straight from a Victorian novel. The “moral” insured was honest, careful, chaste, thrifty, hard working, moderate in habits, and (more on this later) did not gamble: in other words, a Colonel William Dobbin, the moral exemplar of Thackeray’s *Vanity Fair*,⁴⁷ or a Stephen Blackpool, from Dickens’s *Hard Times*.⁴⁸

To be sure, the concerns encompassed within “moral hazard” did not originate with that term. Insurance trade literature from the early nineteenth century, for example, contains discussions of the “personal element” of the insurance risk;⁴⁹ and marine insurance sources from well before then emphasize the materiality of the “character” of those involved with the insured risk.⁵⁰ Once the new name was coined, however, it stuck. Moral hazard quickly became one of the fundamental concerns of the insurance trade and, eventually, the name given to one of the big ideas of neoclassical economics.

ed. 1865) (defining moral hazard as “[t]he danger proceeding from motives to destroy property by fire, or permit its destruction”). Guarantee insurers, the forerunners of today’s surety and bonding institutions, described what they began doing in the 1840s in England as insuring “risk of a moral as well as a mathematical character,” but they do not appear to have coined the term “moral hazard.” See *Guarantee Insurance*, LONDON BANKERS’ MAG., reprinted in 5 BANKERS’ MAG. & STAT. REG. 89 (J. Smith Homans ed., 1853) (examining insurance protection against the dishonesty of employees, but not using the term “moral hazard”). Fire insurance trade literature from the 1840s contains discussions of both the “personal element” of hazard and the “character” of insureds. See, e.g., George W. Savage, *Origin and Nature of Fire Insurance*, 4 HUNT’S MERCHANTS’ MAG. 159, 239 (1842) (arguing that an insured’s lack of effort to prevent or abate loss from fire is “presumptive proof” of criminal or fraudulent intent). Had the term “moral hazard” been widely used that early, it is likely that at least some of the literature I have reviewed would have contained the term. See, e.g., *A City Insurance Company*, NEW ORLEANS COM. BULL., reprinted in 4 BANKERS’ MAG. & STAT. REG. 1005, 1006 (J. Smith Homans ed., 1850) (raising concerns that would later be called “moral hazards” without using that term). An 1855 article in the *New York Insurance Reporter* urged (as if it were a new idea) “[t]hat term ‘hazardous’ which is sometimes applied to buildings, and for which three or four per cent premium is charged, should also apply to the character [of the insured].” *Frauds in Fire Insurance*, NEW YORK INS. REP., reprinted in 32 HUNT’S MERCHANTS’ MAG. 365 (1855).

45. See DUCAT, *supra* note 44, at 9, 165.

46. See *id.* at 12-15 (listing several situations in which insurers should be cautious); D.S. FLETCHER, THE NATIONAL LIFE ASSOCIATION OF HARTFORD, CONNECTICUT, MANUAL FOR THE USE OF AGENTS 19 (1895) (listing “good habits” as a prerequisite for life insurance).

47. WILLIAM THACKERAY, *VANITY FAIR* (J.I.M. Stewart ed., Penguin Books 1968) (1848).

48. CHARLES DICKENS, *HARD TIMES* (George Ford & Sylvère Monod eds., W.W. Norton & Co. 1966) (1854).

49. See, e.g., Savage, *supra* note 44, at 244 (underlining the importance of “ascertaining the character and circumstances of the insured”).

50. See SAMUEL MARSHALL, A TREATISE ON THE LAW OF INSURANCE 221 (1805) (“The name of the master, also should be specified; because his character and ability are material subjects of consideration in estimating the risk.”).

C. *Moral Hazard: Character and Temptation*

Just what makes up the insurance moral hazard? For nineteenth-century insurers, moral hazard was a label applied both to people and situations. The people were those whose character suggested that they were unusually susceptible to the temptation that insurance can create, and the situations were those that heightened that temptation. The 1867 edition of the *Aetna Guide to Fire Insurance* illustrates both these senses of moral hazard and the relationship between the two.⁵¹

The *Guide* begins its description of the underwriting process by admonishing agents to “[c]onsider first the moral hazard.”⁵² The *Guide* then asks:

What is the general *character* borne by the applicant? Are his habits good? Is he an old resident, or a stranger and an itinerant? Is he effecting insurance hastily, or for the first time? Have threats been uttered against him? Is he peaceable or quarrelsome—popular or disliked? Is his business profitable or otherwise? Has he been trying to sell out? Is he pecuniarily embarrassed? Is the stock reasonably fresh and new, or old, shopworn, and unsalable? When was an inventory last taken? Is the amount of insurance asked for, fully justified by the amount and value of the stock? Is a set of books systematically kept?⁵³

Character, or the individual predisposition for fraud or loss, is a dominant concern here. It is the job of, first, the agent, and then the underwriter to weed out “moral hazards”—those insureds most likely to be careless or fraudulent.⁵⁴

The *Aetna Guide* also stressed, however, that there were certain situations which posed a moral hazard for all insureds, regardless of individual predisposition:

[T]he insured should never make money by a loss. The contract should never be so arranged, that under any circumstances it would be profitable to the insured to meet with disaster. Any other arrangement is offering a premium for carelessness and roguery.⁵⁵

51. AETNA GUIDE TO FIRE INSURANCE FOR THE REPRESENTATIVES OF THE AETNA INSURANCE CO. (1867) [hereinafter AETNA GUIDE].

52. *Id.* at 21.

53. *Id.* (emphasis added).

54. *Cf.* SAMUEL R. WEED, HANDBOOK FOR FIRE INSURANCE AGENTS 21 (2d ed. 1904) (“Let the question of moral hazard constantly oppress you. You cannot be too much concerned over the honesty and integrity of applicants for insurance.”).

55. AETNA GUIDE, *supra* note 51, at 157 (emphasis in original). One fire agents’ manual stated: “where there is no valued interest unprotected, people are not always as careful in protecting property as they naturally would be if a portion of the risk was being carried by themselves.” H.S. TIFFANY, TIFFANY’S INSTRUCTION BOOK FOR FIRE INSURANCE AGENTS 46 (10th ed. 1882).

Even in this description, there is a strong reference to character—"carelessness and roguery." The good insured, like the good person, was neither careless nor a rogue. But, because carelessness and roguery, like all sins, are potentially present in even good people,⁵⁶ insurance must be structured so as not to "lead us into temptation." Thus, the insurance "moral hazard" is not only the "immoral" person, but also a characteristic of the insurance relationship itself.

The focus on temptation is even more explicit in the *Aetna Guide's* warning about overinsurance: Heavy insurance also increases the moral hazard, by developing a motive for crime, where otherwise no temptation existed, and wrong was in no way contemplated.⁵⁷ This link reveals an important point: Even the "incentive" aspect of moral hazard was understood in moralistic terms. The classic situation in which insurance most changes incentives—overinsurance—works through temptation, by bringing out the bad in otherwise good people.

The conventional account of the insurance view distinguishes between the *character* of those involved in the risk and the *incentive* created by insurance.⁵⁸ The concept of insurance as incentive, however, reflects the rational choice framework of those who use it and obscures the overridingly moralistic nature of the nineteenth-century insurer's moral hazard. As the *Aetna Guide* illustrates, moral hazard in the insurance context derives from the interrelated dynamics of character and temptation—the worse the insured's character, the less temptation needed to provoke her to cheat the insurance company, and the more likely she is to seek out a situation in which the temptation is present. As insurance manuals would have put it, there is no premium high enough for a building under the care of an arsonist,⁵⁹ and, when the best price that can be obtained for a building is from the insurance company, even an honest person "would not be angered by

56. Cf. WALTER E. HOUGHTON, *THE VICTORIAN FRAME OF MIND 1830-1870*, at 236 (1957). Houghton writes:

Only by realizing what a desperate struggle the moral life entailed, both to resist temptation and to train the will, can we do justice to the Victorian taboos, so often and so easily ridiculed: the prohibition of dancing, cards and the theater For when the standard of interior character was so high and the best approximation to it so precariously poised, anything that was not patently innocent or didactic might at the least distract the mind from God and fasten the heart more securely to the world, or at the worst corrupt the world irredeemably.

Id.

57. *AETNA GUIDE*, *supra* note 51, at 159; *see also* DUCAT, *supra* note 44, at 11-12 (explaining how insurance can offer "a direct incentive to crime").

58. The leading historical and institutional analysis of the problem of moral hazard is HEIMER, *supra* note 13. Heimer describes the insurer's view of moral hazard as a combination of "character" and "economic rationality" or "incentive." *Id.* at 35-37.

59. *See* DUCAT, *supra* note 44, at 11-12.

the discovery that it had been burned.”⁶⁰ An insured meeting an underwriter’s moral ideal would not yield even in the face of the strongest temptation. But this ideal is impossibly high and, therefore, character underwriting, alone, is not enough. Insurers must work to reduce the temptation insurance can create. The moral ideal, still *Vanity Fair*’s Colonel William Dobbin, is the exception that proves this rule.⁶¹

D. *Moral Hazard and the Morality of Insurance*

If there were regular, observable patterns “of moral as well as of physical phenomena,”⁶² and if insurance was to become the practical application of this doctrine of chances, then why resist collecting premiums from, and paying losses caused by, people who ran afoul of the underwriter’s or adjuster’s moral hazard ranking? After all, if suicides, weddings, and crime observed the regularities of dice games, why not carelessness? Insuring people thought more likely to be careless (or even arsonists or thieves) may, in effect, load the dice, but that simply changes the odds, not the fact that the dice will produce predictable results over the long run. All that is required to keep the game afloat is the collection of a higher premium from the morally hazardous.

Understanding this point depends on the recognition that no insurer can identify with perfect accuracy those people who will cause a fire (whether intentionally or through carelessness). At best, the insurer can identify those who are more likely to do so. The fact that insuring these “moral hazards” may increase the chance that they will cause such a fire, does not eliminate chance from the equation, it simply increases the premiums that must be charged to pay the claims. As long as premiums reflect

60. WEED, *supra* note 54, at 21.

61. Near the conclusion of *Vanity Fair*, Colonel Dobbin’s wife learns that her brother had taken out a life insurance policy on himself, and “in a good deal of alarm” assumed that her brother was financially embarrassed (apparently because a gentleman was thought to have no need for life insurance unless his creditors demanded it). THACKERAY, *supra* note 47, at 794. She immediately dispatched Dobbin to see her brother, who explained that he had taken the insurance policy out to provide a “little present” for his disreputable companion, Lady Rebecca Crawley, the former Becky Sharp (to whom he certainly could not leave anything in his will). *Id.* at 794-95. Dobbin counseled his brother-in-law that Rebecca was capable of killing for the money and warned him to break off the relationship.

When the brother-in-law died three months later, it turned out that the life insurance proceeds were payable half to Rebecca and half to Dobbin’s wife. The Insurance Office at first refused to pay Rebecca—“[t]he solicitor of the Insurance Company swore it was the blackest case that ever had come before him”—*id.* at 796, but relented under pressure from Rebecca’s solicitors, Messrs. Burke, Thurtell, and Hayes (names that, according to the notes to the Penguin English Library edition, the nineteenth century reader would have known as notorious murderers). *Id.* at 813 n.7. Colonel Dobbin, however, was made of much finer stuff. Thackeray reports that he “sent back his share of the legacy to the Insurance Office, and rigidly declined to hold any communication with Rebecca.” *Id.* at 796.

62. Binney, *supra* note 39, at 393.

the risk of the subpopulations insured, a decision to insure the morally hazardous does not mean that insurance premiums will rise for everyone.

Despite the similarity between moral and physical hazards, nineteenth-century insurers treated moral and physical hazards in one remarkably different way. Except in the extreme case, the answer to most *physical* hazards was a higher premium rate, not a refusal to insure.⁶³ Finding the premium that would adequately reflect that hazard required experimentation, which sometimes ended in failure and an ultimate refusal to insure.⁶⁴ Refusal to insure, however, was a last resort.

With moral hazard, in contrast, refusal to insure was the first resort. Unlike the applicant who presented a greater-than-usual physical hazard, the applicant who presented a greater-than-usual moral hazard could not obtain insurance at a higher price.⁶⁵ There appears, in other words, to have been no experimentation in life and fire insurance with moral hazard based premium classes, notwithstanding extensive attention in the trade literature to moral hazard characteristics. While it is undoubtedly true that the physical hazard of a risk was more readily observable than the moral hazard, this alone cannot explain the lack of experimentation. Moral hazard was regarded as sufficiently observable to form the basis for a refusal to insure, and a premium surcharge could not have been insurmountably more difficult to administer.⁶⁶ Yet, as the *Aetna Guide* illustrates,

63. For example, in a town that contained largely brick dwellings, a wooden structure would not be rejected on the basis of physical hazard, but rather assessed a larger premium based on some sense of the relative risks posed by wood as compared to brick. Compare DUCAT, *supra* note 44, at 78 (describing wood-frame building rates), with *id.* at 63-64 (describing brick building rates). Similarly, a life insurance applicant with a medical history could, to a point, obtain insurance, just at a higher price. See, e.g., FLETCHER, *supra* note 46, at 10. Under the hazard-based premium-rating principles, insureds classed as presenting low physical hazards were shielded from the claims of those classed as presenting a greater physical hazard, but only those classed as the most hazardous were shut out of the insurance club altogether.

64. See F. HARCOURT KITCHIN, *THE PRINCIPLES AND FINANCE OF FIRE INSURANCE* 1 (1904) ("The science of fire insurance is a purely experimental one."); ROBERT RIEGEL, *FIRE UNDERWRITERS' ASSOCIATIONS IN THE UNITED STATES* 38-43 (1916) (describing reports by fire underwriters admitting that fire insurance rates were "guesses" not based on "statistics").

65. See DUCAT, *supra* note 44, at 12-15 (stating that agents should "reject" applicants with various characteristics, unless the agent was "well satisfied" that the applicant was "worthy of your confidence"); TIFFANY, *supra* note 55, at 24 ("If the moral hazard is not good, there are no considerations that would induce a company to accept the risk . . ."); AETNA GUIDE, *supra* note 51, at 13 ("Moral Hazard—The character of the applicant is usually of the first importance; and where this is not satisfactory, the application should be dismissed at once."); MANUAL FOR SUPERINTENDENTS AND ASSISTANT SUPERINTENDENTS OF THE METROPOLITAN LIFE INSURANCE COMPANY OF NEW YORK, at Form 1, ¶ 8 (1889) [hereinafter METROPOLITAN MANUAL] (listing as uninsurable "those who have been of intemperate habits" and "persons of ill-fame").

66. The New York Insurance Reporter urged just such a system in 1855. See *Frauds in Fire Insurance*, *supra* note 44, at 365 ("By a rigid inquiry into the character of every applicant for insurance, and by graduating the amount of premium accordingly, the burden would be mainly borne by those who ought to bear it.").

insurance companies' avowed goal was to avoid moral hazard—not to underwrite, rate, control, or otherwise manage it.

This resistance to insuring moral hazards lies in great tension with the apparent faith in the moral scientists' doctrine of chances. Not all of life, it seems, was to be ceded to the field of Hazard. What remained to be left outside was the realm of evil: crime, fraud, and the suspicious "other." Thus, nineteenth-century life and fire insurers limited the insurance of moral hazards, not because of complexity or for other technical reasons, but because of ideas about right and wrong, as the term "*moral hazard*" suggests. Insurance was a moral enterprise "deeply interested in the growth of public and private honor," and insurance men had a duty to "[g]uard[] against moral hazard from without" and "against moral perversion from within."⁶⁷ Everyone involved in the enterprise, both insurer and insured, had an obligation to exclude the immoral.⁶⁸

While at least some of the insurance men believed that they could insure moral hazards (as long as the rates were adequate), those who did so came under attack.⁶⁹ Refusing to insure moral hazards affirmed the morality of insurance at a time when building the small, largely commercial insurance business into a mass consumer enterprise required assuaging widespread moral concerns. As Viviana Zelizer has documented in her study of nineteenth-century life insurance, assuaging these concerns was no

67. Thomas S. Chard, *Morals and Moral Hazard as Related to Underwriting*, Address Before the Fire Underwriters' Association of the Northwest (Sept. 22, 1875), in *PROCEEDINGS OF THE SIXTH ANNUAL MEETING OF THE FIRE UNDERWRITERS' ASS'N OF THE NORTHWEST* 28, 32 (1875).

68. The responsibility to guard against immorality was not limited to insurance companies; it also extended to insureds, who were urged to report "swindlers" because

[t]he rates of premium charged by insurers, are governed by the amount of losses. Thus the honest man is made to contribute for the acts of the swindler, by paying the higher rate of premium, which goes indirectly into the coffers of those who live by these frauds, to the great injury of the innocent.

James Bergen, *Fraud Upon Underwriters*, 2 *HUNT'S MERCHANTS' MAG. & COM. REV.* 296, 297 (1840).

69. Fire insurers, for example, were criticized for covertly insuring moral hazards. See *Condition of the Fire Insurance Interest*, 56 *HUNT'S MERCHANTS' MAG. & COM. REV.* 204 (1867) (reporting on a fire insurance convention in which insurers agreed to raise rates because of heavy losses, assertedly due to arson, in the past two years). The objection raised in the trade press was not an adverse selection argument of the sort we might expect today, but rather the unfairness of "taxing" the honest for the misdeeds of the dishonest: "The public have a right to expect of the insurance companies that they exercise a most searching scrutiny into the degree of risk arising from this cause, so that they be not needlessly taxed, by an increase of premiums, to cover the destruction caused by incendiaries. The true remedy in this case is in prevention, rather than an increase of rates." *Id.* at 205; see also ALEXANDER COLIN CAMPBELL, *INSURANCE AND CRIME* 136 (1902) ("At least two generations of men have been engaged in making compacts and agreements among companies to increase rates and maintain them at a point at which the moral hazard could safely be left in a secondary place in the calculation."). For support for the claim that fire insurers were able to control rates, see BARRY SUPPLE, *THE ROYAL EXCHANGE ASSURANCE: A HISTORY OF BRITISH INSURANCE, 1720-1970*, at 282 (1970) (reporting the "relative success" of British fire insurers in controlling rates in the mid to late nineteenth century).

easy task.⁷⁰ The mid-nineteenth century witnessed a cultural struggle over the morality of the insurance enterprise in which insurance was attacked as a form of gambling, a handmaiden to crime, and, above all, a presumptuous interference with Divine Providence. The insurer's moral hazard both reflected these concerns and responded to them.

1. *Providence*.—The claim that insurance interfered with Providence was largely used to attack life insurance.⁷¹ Nevertheless, it has a broader cultural resonance that is reflected in, for example, Melville's *The Lightning-Rod Man*.⁷² Melville's lightning rod salesman was Lucifer himself, who appeared in a storm to tempt the narrator into paying for protection against God's thunder bolts.⁷³ The story reveals a perspective from which insurance itself can be seen as a moral hazard—a sinful effort to ward off the earthly means through which God's plan is executed.

Eventually, the objection that insurance interfered with the Divine Plan was turned on its head as the insurance men turned calamity into chance and linked insurance to the cultural values of self-reliance, thrift, and acquisitiveness. While people must rely on Divine Providence, they must also “employ[] the means by which the Providence of God acts”—that is to say, insurance—to take care of their own.⁷⁴ Indeed, insurance writers argued that what was immoral was the failure to exercise the prudence and self-restraint required to obtain and pay for insurance, not the reverse.⁷⁵

70. See ZELIZER, *supra* note 9, at 91-117.

71. See, e.g., E.W. Stoughton, *Life Insurance*, 2 HUNT'S MERCHANTS' MAG. 230, 232 (1840) (reporting the objection but concluding that insuring life is not materially different from insuring property because losses generally depend on chance). For a general discussion of the morality of life insurance, see ZELIZER, *supra* note 9, at 73-79.

72. See HERMAN MELVILLE, *The Lightning-Rod Man*, in PIAZZA TALES 141 (Egbert S. Oliver ed., 1962) (1856). The story was first published in 1854. See Egbert S. Oliver, *Explanatory Notes to MELVILLE, supra*, at 238.

73. A parallel and contemporaneous vision of lightning rods appears in G.H. LEWES, THE LIFE OF MAXMILIEN ROBESPIERRE, reprinted in R. BRUCE BICKLEY, JR., THE METHOD OF MELVILLE'S SHORT FICTION 68-69 (1975). Lewes reports that the following charges were lodged against a French landowner for erecting a lightning rod:

[S]hall we rend the lightning from the hand of God? Shall man presume to intercept the wrath of the Deity[?] If God wills to destroy houses or farms, it is his will and pleasure—man's duty is to submit. These lightning conductors are but the impious thoughts of Deistical philosophy!

For a neoclassical economic discussion of the relationship between lightning rods and insurance, see Ehrlich & Becker, *supra* note 4, at 638 (comparing insurance and protection against loss).

74. *The Morality of Life Insurance*, 22 HUNT'S MERCHANTS' MAG. & COM. REV. 117 (1850); see also Stoughton, *supra* note 71, at 235 (“Is there any presumption towards his Maker, in thus endeavoring to make an event, which must inevitably produce mourning and unhappiness in the hearts of his wife and children, fall upon them as lightly as possible?”).

75. See MOSES L. KNAPP, LECTURES ON THE SCIENCE OF LIFE INSURANCE 21 (1853) (“A Life Insurance Company, then, is a brotherhood of provident husbands and fathers, who love their wives and children.”); *id.* at 205-36 (discussing the moral influence of life insurance); Cook, *Life Insurance:*

The emphasis on moral hazards reinforced the morality of insurance. Because no systematic method for rating moral hazards existed (notwithstanding the dreams of the moral scientists), a few rules of thumb together with conventional morality—"I know it when I see it"—were the only guides underwriters had.⁷⁶ As a result, the people excluded as moral hazards deviated from conventional morality, or, more importantly, were regarded as deviant by that conventional morality.⁷⁷ In contrast, the people permitted to insure were "the very best class of the community."⁷⁸ In the words on one turn-of-the-century advertisement, "[i]nsurance against want by preparation for it is . . . the most human, and the most in accordance with the teachings of the Christian religion."⁷⁹ In an important sense, it did not matter whether the people excluded actually incurred greater losses than the people sold insurance (how could anyone possibly know?). Excluding those who deviated from the conventional—whether because of religion, birthplace, unpopularity, or manner of making a living—signified that insurance was a moral enterprise.

Its Advantages to the Working Classes, Address before the Mechanics' Institute and Library Association of Quebec, in 4 BANKERS' MAG. & STAT. REG. 370, 381 (J. Smith Homans ed., 1849-50) ("Let not those who neglect this precaution, which prudence and affection, care for the bodily comforts, and even for the moral good of their families, should alike prompt them to take, say they *cannot*. They *can* if they *will*." (emphasis in original)).

76. A.F. Dean, the nineteenth-century author of the influential *Analytic System for the Measurement of the Relative Fire Hazard*, concluded that moral hazard cannot be captured by a classification list and can only be addressed by "the skill of the company management." A.F. DEAN, *Classified Experience*, in 2 THE PHILOSOPHY OF FIRE INSURANCE 8, 52, 51-53 (W.R. Townley ed., 1925); see also Richard M. Bissell, *Rates and Hazards*, in 2 YALE INSURANCE LECTURES 92, 92 (1903-04) ("Moral hazards are hidden, presumed rather than known, not to be measured or scheduled.").

77. See DUCAT, *supra* note 44, at 12-15 (listing as moral hazard markers "bad or dishonest character," "strangers," "embarrassed persons," "temporary or itinerant trading," "parties . . . who is [*sic*] unpopular," and "careless persons"); see also PACIFIC MUT. LIFE INS. CO. OF CAL., BOOK OF RATES, VALUES AND INSTRUCTIONS 494 (1909) ("The company will not grant a policy to any person known to be a gambler."); cf. TIFFANY, *supra* note 55, at 44 (noting that insurance companies are not interested in "Peter Smith, a wild harem-scarem fellow, who is, to say the least, not noted for being the most careful and discreet person in the world").

78. *Benefits of Life Insurance*, 53 HUNT'S MERCHANTS' MAG. & COM. REV. 390 (1865).

79. Advertisement for Massachusetts Mutual Life Insurance Company, INS. MONITOR (HALF-CENTURY ANNIVERSARY ISSUE 1853-1903), Dec. 1903, at xviii. As the advertisement suggests, the conventional morality reflected in the turn-of-the-century insurance trade had a profoundly anti-semitic side. Cf. *Responsibility for Fraudulent Jewish Losses*, 55 INS. MONITOR 23 (1907) ("There are honorable Jews as there are honorable Gentiles, but that the evil disposed among the race gravitate to incendiarism is a notorious fact, and the underwriters who close their eyes to moral hazard wrong the companies and wrong their community.").

2. *Gambling*.—The objection that insurance was gambling⁸⁰ is a complicated one whose surface can only be skimmed here. The “prudential” and “speculative” elements of life insurance were inextricably intertwined at the beginning of the insurance industry and remained that way well into the nineteenth century.⁸¹ Moreover, it is the received wisdom about the history of Lloyds that the speculative element was not driven out of marine insurance until the late eighteenth century when a group of underwriters quit Ed Lloyds’s original coffee house and set up the New Lloyds coffee house which forbade gambling.⁸² Thus, the “objection” that insurance was gambling may have been no objection at all, but rather a truism mouthed by those who wished to separate the speculative element of insurance from the prudential element.⁸³

Nevertheless, the objection resonated in the moral climate of the time. Melville’s image of Lucifer peddling lightning rods might have stretched popular sentiment, but the image of Lucifer running a dice game did not. Association with gambling threatened the legitimacy of insurance,⁸⁴ and there was a continuing effort, both in the insurance literature⁸⁵ and in the

80. See, e.g., A.B. Johnson, *The Relative Merits of Life Insurance and Savings Banks*, 25 HUNT’S MERCHANTS’ MAG. & COM. REV. 670, 671 (1851). Johnson writes:

But gambling lures men from industry, frugality, and accumulation, by hopes of gain, through processes less slow than these, and less self-denying; and in this result, also, life insurance assimilates with gambling. . . .

No man is so reckless as to remain in bed, when the house in which he is lying is on fire; but he may reside in a dilapidated house till it fall and crush him, if the catastrophe is not imminent. So, if no life insurance would provide for our families, after our decease, no health insurance or club would provide for ourselves during disease, and bury us decently when dead, we should provide for these purposes by self-denying accumulations.

Id.

81. See Clark, *supra* note 37, at 15-34, 78-117 (tracing the interrelation between the seemingly opposed motives of risk aversion and risk taking in the insurance business through their gradual separation in the eighteenth and nineteenth centuries). According to Robin Pearson, the prudential aspect of life insurance did not succeed the speculative element until some time after 1850. See Robin Pearson, *Thrift or Dissipation: The Business of Life Assurance in the Early Nineteenth Century*, 43 ECON. HIST. REV. 236, 253 (1990).

82. See FREDERICK MARTIN, *THE HISTORY OF LLOYD’S AND OF MARINE INSURANCE IN GREAT BRITAIN 155-57* (1876).

83. See Clark, *supra* note 37, at 67 (arguing that the passage of the Gambling Act of 1774, which prohibited wagering policies, “represented the first attempt to sunder activities that had previously been carried out in a common domain and to consign them to different operation and moral spheres”).

84. See ZELIZER, *supra* note 9, at 72; see also SUPPLE, *supra* note 69, at 281 (reporting that in the late nineteenth century the established insurance companies attacked “valued policies,” which paid a fixed amount in the event of loss, as being a “species of gambling”).

85. See, e.g., Benjamin J. Foster, *Insurance: Its History, Legal Philosophy, and Morals*, 20 HUNT’S MERCHANTS’ MAG. 499, 499-500 (1849) (distinguishing “wager” policies from legitimate insurance); President Washburn, *Insurance Not a Gamble*, 51 INS. MONITOR 428, 428 (1903) (noting the “general misconception” that fire insurance resembles gambling).

courts,⁸⁶ to manage that association in a way that permitted the insurance enterprise to grow.

In distinguishing insurance from gambling, insurance writers often relied on difficult-to-maintain intent distinctions (for example, insurers seek protection against losses, gamblers seek gains⁸⁷) or subterfuge (for example, equating life insurance and savings plans⁸⁸). On close analysis, these efforts are not particularly persuasive and seem much less satisfying than the appeal to self reliance, thrift, and acquisitiveness that overcame Divine Providence. Insurance and gambling are not only difficult to separate historically, they are also difficult to separate analytically.⁸⁹

In the end, the strategy of the insurance men was to separate insurance and gambling institutionally: Whatever "gambling" was, it was not something that "insurance" institutions would do.⁹⁰ Attention to moral hazard

86. See, e.g., *Riggs v. Commercial Mut. Ins. Co.*, 25 N.E. 1058 (N.Y. 1880) (holding that a stockholder's insurance on a steamship was not a wager policy); *In re Corson*, 6 A. 213, 214 (Pa. 1886) (affirming that a policy was a "wicked speculation by wager in human life" where a nephew did not have an insurable interest in his aunt).

87. See, e.g., Savage, *supra* note 44, at 160. Savage writes:

Insuranceis, in reality, nothing more than a wager, for the underwriter who insures at one per cent, receives one dollar to return one hundred upon the contingency of a certain event; and it is precisely the same in its operation as if he had bet a wager of ninety-nine dollars to one that the property does not burn, or that a certain event does not happen. . . . But, in a moral point of view, it should be considered entirely different. The character of an act is determined by its spirit, intention, and consequences. An individual that insures a *bona fide* interest, does it with a different intention than he who obtains a policy upon property in which he has no interest; for the latter hopes to make a gain, the former to protect himself from loss[.]

Id.

88. See Joseph B. Collins, *Life Insurance*, 26 HUNT'S MERCHANTS' MAG. 196, 196 (1852) (replying to A.B. Johnson, and maintaining that "[l]ife insurance is simply a system of deposits for accumulation, over which the principle of average is extended for the protection of those who would otherwise suffer from the premature death of the insured").

89. Cf. Edwin W. Patterson, *Hedging and Wagering on Produce Exchanges*, 40 YALE L.J. 843 (1931) (explaining the problematic distinction between hedging and wagering in civil litigation); *Homestead Fire Association*, 3 INS. MONITOR 97, 97 (1857) ("[I]nsurance contracts partake so much of the character of wagers, that we do not feel at all satisfied that our courts would favor them among private individuals. Public policy should certainly discourage the transaction of Insurance in this way, for the tendency of the business, if left 'on the loose' would inevitably be towards gambling of a very desperate kind."). Even sophisticated contemporary observers still get tripped up in attempting to draw this distinction. See, e.g., Francois Ewald, *Insurance and Risk*, in THE FOUCAULT EFFECT: STUDIES IN GOVERNMENTALITY 197, 201 (Burchell et al. eds., 1991) [hereinafter THE FOUCAULT EFFECT] ("Risk is calculable. This is the essential point, whereby insurance is radically distinct from a bet or a lottery."). For a recent attempt to distinguish gambling from insurance, speculation, and investment, see RUEVEN BRENNER & GABRIELLE A. BREHNER, *GAMBLING AND SPECULATION: A THEORY, A HISTORY, AND A FUTURE OF SOME HUMAN DECISIONS* 90-112 (1990).

90. Research by cognitive psychologists suggests we are not far removed from this form of reasoning. In an experiment in which subjects were asked whether they would be willing to pay a given amount of money in order to avoid a much larger loss in the future, the probability of which made the payment objectively beneficial, the willingness of the subject to make the payment depended on whether the payment was characterized as insurance. If the payment was "insurance," the subjects

helped achieve that goal. For example, the common law “insurable interest” requirement (which was one solution to the temptation aspect of the moral hazard problem) declared that insurance policies sold to people who lacked an “insurable interest” were voidable “wagering” policies. In so doing, the common law legitimated all other policies as *not* wagering policies. Similarly, the solution to the character aspect of the moral hazard problem—excluding “moral hazards”—allowed insurers to claim innocence by association: Gambling is immoral; people who gamble are immoral; we and the people we permit to buy insurance are moral (because we exclude the immoral); therefore, insurance is not gambling.⁹¹

3. *Crime*.—The link between insurance and crime was a staple in the popular imagination,⁹² as well as the insurance literature.⁹³ The theme, once again, is insurance as temptation, and an important solution is excluding those whose character marks them as susceptible to that temptation. Because insurance offers an opportunity for crime, insurers need to, and do, exclude criminals (and those linked in the popular mind with criminals);⁹⁴ therefore (once again) insurance can be maintained as a moral enterprise.

All this demonstrates a curious aspect of the insurer’s moral hazard. What in retrospect appears to be a failure to extend the rationalizing technology of insurance to its full potential was no failure at all because it facilitated the broad extension of insurance practice. The rhetoric of moral hazard permitted the insurance men to deny that insurance broke with conventional morality, and to believe their own denial, even as the enterprise

wanted to make it. See Paul Slovic et al., *Response Mode, Framing, and Information-Processing Effects in Risk Assessment*, in *NEW DIRECTIONS FOR METHODOLOGY OF SOCIAL AND BEHAVIORAL SCIENCE: QUESTION FRAMING AND RESPONSE CONSISTENCY* 21, 26-28 (Robin M. Hogarth ed., 1982); Amos Tversky & Daniel Kahneman, *The Framing of Decisions and the Psychology of Choice*, 211 *SCIENCE* 453, 456 (1981).

91. See, e.g., TIFFANY, *supra* note 55, at 20 (“This business is not a mere lottery or game of chance, but an honorable one in which some of the most experienced men of the age are engaged, and in which millions of money are invested.”).

92. See *supra* note 61; see also VIVIANA A. ZELIZER, *PRICING THE PRICELESS CHILD: THE CHANGING SOCIAL VALUE OF CHILDREN* 114 (1985) (describing the perceived link between child life insurance and murder); *DOUBLE INDEMNITY* (Paramount 1944).

93. See, e.g., J.B. LEWIS & C.C. BOMBAUGH, *REMARKABLE STRATAGEMS AND CONSPIRACIES: AN AUTHENTIC RECORD OF SURPRISING ATTEMPTS TO DEFRAUD LIFE INSURANCE COMPANIES* (1878); Henry Mayhew, *An Inquiry into the Number of Suspicious Deaths Occurring in Connection With Life Insurance Offices*, 4 *INS. MONITOR* 73 (1856) (describing London insurance offices’ experience with fraudulent application and murder).

94. See DUCAT, *supra* note 44, at 133, 138 (listing as “uninsurable” theaters, museums, and shows). Modern legacies of this practice include higher rates for publicans, reporters, and others. See Adam Hawk, *Adam Hawk Asks Why Publicans, Journalists and Furriers Are Still Penalised by Motor Underwriters as Moral Hazards, and Asserts that Rating by Occupation is an Irrational Practice*, *POST MAG.*, Oct. 10, 1986 (reporting on British automobile insurance rating).

they built travelled down the road towards the abandonment of that morality in favor of a populational, actuarial understanding of the world.⁹⁵ Our present discomfort with at least some of the character aspects of moral hazard⁹⁶ may simply reflect the success of the nineteenth-century insurance men.⁹⁷

E. *Insurance Talk and Insurance Practice*

As the *Aetna Guide* illustrates, nineteenth-century insurance writers prescribed two responses to the problem of moral hazard: excluding morally hazardous applicants and structuring the insurance contract so that no one could make a gain through an insured loss. Looking back, it is easy to see in these prescriptions the straightforward, rationalist goal of the present generation of economist-insurers—identifying those insureds and offering them that coverage that will produce the most favorable ratio of losses paid to premiums collected. Observing the attention to moral hazard in the trade since then, it is also easy to conclude that the insurers' moral hazard prescriptions were central to achieving that goal.⁹⁸ There is a problem with this use of history, however. When it came to moral hazard, insurers may not have practiced what they preached, and their preaching may have served entirely different functions.

Consider first the insurance agent's role in avoiding moral hazard. As today, insurance agents in the nineteenth century worked on commission. That commission depended on the amount of premiums collected, apparently without regard for the claims paid in return for those premiums.⁹⁹ Yet, the measures which agents were told to use to control moral hazard—exclusion of morally risky applicants and low insurance limits—reduced the amount of premiums an agent could collect. Thus, insurance agents had a temptation problem of their own: "The temptation which creates this attitude is the commission paid without regard to the character of the services, and the measure of the temptation is the size of the commission."¹⁰⁰

95. See Ewald, *supra* note 89, at 197 (describing insurance as an "abstract technology" that combines "various elements of economic and social reality according to a set of specific rules").

96. See HEIMER, *supra* note 13, at 39 (arguing that the purpose of detecting bad character "is to classify risks to be insured rather than to exclude uninsurable risks"); Heimer, *supra* note 10, at 46-47 (describing the link between character underwriting and the assumption that "immigrants and blacks were poor risks").

97. Cf. Ian Hacking, *How Should We Do the History of Statistics*, in THE FOUCAULT EFFECT, *supra* note 89, at 184 ("When there is a radical transformation of ideas, whether by evolution or by an abrupt mutation, I think that whatever made the transformation possible leaves its mark upon subsequent reasoning.").

98. See, e.g., Olson, *supra* note 1, at 233-34 (advocating the use of private insurance practices as a model for social insurance problems).

99. See TIFFANY, *supra* note 55, at 17 (reporting the general practice of paying 15% of premiums collected as commission).

100. A.F. DEAN, *Do Rate Cutting and High Commissions Lower Rates?*, in 1 THE PHILOSOPHY OF FIRE INSURANCE, *supra* note 76, at 94, 99. The term "moral hazard" was not applied to this kind

While insurance manuals are full of warnings about such behavior,¹⁰¹ agents had significant control over the information that the home office received about applicants and could operate with little oversight.¹⁰²

The most compelling evidence that insurance agents used this control to avoid formal home office restrictions comes from the history of the valued policy laws enacted in the late nineteenth century. Valued policy laws made an insurance company liable for the face amount of an insurance policy in the event of a total loss, regardless of the value of the building. The laws were enacted in reaction to fire insurers' practice of selling insurance policies with large face values and then, after a fire, refusing to pay more than the value of the building destroyed, even though the insured had paid premiums for "more" insurance.¹⁰³

A cardinal rule of fire insurance underwriting was (and is) "no overinsurance."¹⁰⁴ Yet, overinsurance was sufficiently common near the turn of the century that about half the state legislatures enacted valued policy laws.¹⁰⁵ If agents regularly violated the rule against overinsurance, it is a near certainty that they also regularly obtained insurance for people that underwriters would have considered moral hazards.

Consider also the role of the insurance contract in avoiding moral hazard.¹⁰⁶ Since at least the mid-nineteenth century, fire insurance policies have contained provisions that represent an effort to prevent gain

of principal-agent situation until economists generalized the moral hazard problem. See, e.g., Holmström, *supra* note 4, at 74 ("It has long been recognized that a problem of moral hazard may arise when individuals engage in risk sharing under conditions such that their privately taken actions affect the probability distribution of the outcome.").

101. See, e.g., DUCAT, *supra* note 44, at 15 (admonishing agents not to "let your desire for premiums or commissions blind you" to potential risks); TIFFANY, *supra* note 55, at 17 ("Do not allow your better judgment to be biased by any temporary profit."); METROPOLITAN MANUAL, *supra* note 65, at 7 ("If the accounts of your Agents, therefore, show frequent deficiencies, excessive balances, disproportionate lapses, low collections, frequent transfers or excessive claims, your management will not be deemed satisfactory.").

102. See, e.g., METROPOLITAN MANUAL, *supra* note 65, at 10 (instructing supervisors to test the business of new agents during the first few weeks, but afterwards only "as your judgment may dictate"); Samuel R. Weed, *My Agency Experiences and Adventures Thirty-Five Years Ago*, INS. MONITOR (HALF-CENTURY ANNIVERSARY ISSUE 1853-1903), Dec. 1903, at 45, 46 ("[A]bout all the information the company received was the policy number, the name of the insured, amount, time, rates, premium, beginning and ending, and a line or two stating whether it covered buildings or contents.").

103. See SPENCER L. KIMBALL, INSURANCE AND PUBLIC POLICY 240-42 (1960) (discussing the enactment of a "valued-policy" law by the Wisconsin legislature, which pioneered the way for other states to do the same in reaction to industry overinsurance practices).

104. AETNA GUIDE, *supra* note 51, at 157-59.

105. See KIMBALL, *supra* note 103, at 241. Additional evidence of widespread overinsurance comes from admonishments to agents regarding other insurance. For example, Tiffany's stated that "one of the greatest errors made, has been the indiscriminate permission for other insurance to an unlimited amount" and that this error was made because "companies as a rule have been too anxious to secure the business to assert their rights." TIFFANY, *supra* note 55, at 45.

106. See HEIMER, *supra* note 13, at 43 (describing the centrality of contract-based moral hazard control measures).

through loss.¹⁰⁷ Examples include provisions limiting payment in the event of loss to the “actual cash value” of the loss, regardless of the face value of the policy,¹⁰⁸ and a series of provisions voiding the policy in the event the insured’s interest in the property is less than disclosed.¹⁰⁹ Because of yet another incentive problem (that of the insurance adjuster), the consistent application of these contract-based moral hazard control measures is almost as doubtful. Adjusters, like insurance agents, operate under only limited control from the home office and, therefore, have discretion to pursue their interests at the expense of the insurance company.¹¹⁰ Because adjusters control the information that goes into the claim file, they can and do pay claims to avoid a fight, or for other reasons, even when their superiors might prefer otherwise.¹¹¹

Furthermore, as Professor Goble documented in an early twentieth-century survey,¹¹² the moral hazard clauses were so widely breached that insurance companies simply could not have insisted upon compliance.¹¹³ The practice then must have been similar to the practice today in which adjusters regularly waive such “technicalities” unless they have some other reason for objecting to the claim.¹¹⁴ While in theory that practice may enable a more finely tuned, situation-specific evaluation of the merits of a claim (which would inevitably involve a moral judgment about the claimant¹¹⁵), determining whether that practice served that function is beyond our knowledge today.

107. See generally George W. Goble, *The Moral Hazard Clauses of the Standard Fire Insurance Policy*, 37 COLUM. L. REV. 410 (1937) (describing the history of the influential New York Standard Form and the moral hazard clauses within it).

108. This is the provision that, absent the valued policy laws, enabled insurance companies to collect premiums on the basis of the high value that the insured selected and then limit payment to a lesser amount at the time of loss. See KIMBALL, *supra* note 103, at 240-41 (noting the insurance companies’ attempts to protect themselves “against overinsurance through an indemnity principle, which restricted the policyholder’s recovery to his actual loss, no matter how much the face of the policy might be”).

109. See Goble, *supra* note 107, at 415.

110. For ethnographic evidence regarding the “gap” between the rule and practice of insurance adjusting, see H. LAURENCE ROSS, *SETTLED OUT OF COURT* (1970); Tom Baker, *Constructing the Insurance Relationship: Sales Stories, Claims Stories, and Insurance Contract Damages*, 72 TEXAS L. REV. 1395 (1994); Tom Baker & Karen McElrath, *Whose Safety Net? Home Insurance and Inequality*, 21 L. & SOC. INQUIRY 229 (1996).

111. See ROSS, *supra* note 110, at 204-09 (explaining how adjusters are ultimately responsible for deciding when to settle claims).

112. Goble, *supra* note 107.

113. Based on a review of property records and the moral hazard clauses in the standard form, Goble concluded that “28% of all fire insurance policies on real property and 55% of all fire policies issued on jointly owned real property are void and unenforceable under the law of Illinois.” *Id.* at 418.

114. See Baker & McElrath, *supra* note 110, at 250-51 & n.58 (describing the exercise of adjuster discretion and contract technicalities which could limit the insured’s recovery); Goble, *supra* note 107, at 426 (“The underwriters’ reply to this is that if they believe the claimant to be honest, they will pay the loss despite the violation of a condition.”).

115. See Baker & McElrath, *supra* note 110, at 251 (describing how adjusters make moral assessments of claims and claimants).

Indeed, it was beyond knowledge then. About all nineteenth-century insurers could know was whether a particular line of business or set of agencies was profitable.¹¹⁶ They had no reliable way to determine whether any particular moral hazard control measure made any measurable difference in the profitability of the business. Because insurers openly cooperated in setting rates, writing contracts, and training personnel,¹¹⁷ there were no “controls” to use as a basis for determining whether changing the contract or company procedures offered a comparative advantage. Even if there had been controls, undertaking the necessary analysis would have been insurmountably difficult. The relevant data were proprietary and maintained in incompatible ways by different companies;¹¹⁸ contract-based measures were introduced in tangled bunches;¹¹⁹ there was no effort (or means) to track the losses of applicants rejected on moral hazard grounds; and insurance companies lacked what we now regard as essential tools—computers and multiple regression analysis.¹²⁰ Evaluating the relationship between no-fault liability and automobile accident rates, an exercise that has generated significant methodological hand wringing in recent years,¹²¹ is easy by comparison.

From this historical distance, however, it is possible to describe one function that moral hazard did serve at the claims end of the insurance relationship. The “claims story” of the immoral insured underscored (and still underscores) much of the work of the insurance adjuster. If insurance and crime (or fraud) are linked, then any claim is at least potentially criminal, and the insurer must investigate and value the claim with some

116. See T.E. YOUNG & RICHARD MASTERS, *INSURANCE OFFICE ORGANISATION, MANAGEMENT, AND ACCOUNTS* 88-124 (1904) (describing the information recorded in the records kept by fire and life insurance departments); Weed, *supra* note 102, at 46 (“[A]bout all the information the company received was the policy number, the name of the insured, amount, time, rates, premium, beginning and ending, and a line or two stating whether it covered buildings or contents.”).

117. Cf. Lester W. Zartman, *Discrimination and Coöperation in Fire Insurance Rating*, in *YALE READINGS IN INSURANCE: FIRE INSURANCE* 199, 215 (Lester W. Zartman ed., 1909) (describing insurance companies’ attempts to set fire insurance rates relative to the actual risk).

118. See *id.* at 206 (“The fact to be kept in mind regarding all rates, schedule or otherwise, is that they have no statistical basis.”); see also HEIMER, *supra* note 13, at 54 (“[S]ince no two companies used the same classification system, when people did get around to trying to make universal rating schemes in the late 1800s, what statistical evidence was available was essentially useless.”).

119. See W.F. Fox et. al., *Report of Committee on Form of Policy*, in *PROCEEDINGS OF THE SIXTH ANNUAL MEETING OF THE FIRE UNDERWRITER’S ASS’N OF THE NORTHWEST* 44-52 (1875) (discussing proposed amendments to the “National Board Form of Policy”).

120. Francis Galton is typically credited with developing the concepts of correlation and multiple regression in the late nineteenth century. See DONALD A. MACKENZIE, *STATISTICS IN BRITAIN 1865-1930*, at 9-10 (1981). The early applications of those concepts were primarily in the fields of eugenics and biology, largely through the work of Karl Pearson and W.F.R. Weldon’s biometrics school during the early twentieth century. See *id.* at 101-02. One of Pearson’s graduate students, David Heron, left the biometrics school in 1915 to become the chief statistician for the London Guarantee and Accident Co., Ltd. See *id.* at 108-10.

121. See *infra* notes 211-18 and accompanying text.

care.¹²² The insurance-fraud link makes this investigation a public service, not an effort to avoid an obligation.¹²³ When combined with the injunction that no insured should gain from a loss, the insurance-crime link can be a potent tool in the hands of the insurance adjuster.¹²⁴

Moral hazard also played a complementary role in the political theater of the insurance rate-setting process. The same industry that stressed character underwriting to its agents, and that stressed the morality of insurance to the public, told another story when justifying insurance rates. Like the claims story of the immoral insured, the rate story stressed the largely uncontrollable immorality of the insurance-buying public and, therefore, the need for high rates.¹²⁵

In sum, rather than demonstrating that insurance agents or adjusters "in fact" did much to address moral hazard, or that doing so "in fact" would improve loss ratios, the emphasis on that subject in the nineteenth-century insurance trade literature demonstrates only that the formal position of the home office was that agents and adjusters should do so. Thus, nineteenth-century insurance talk about moral hazard makes the effect of moral hazard (and moral hazard control measures) on loss ratios "probable" only in the sense that moral hazard is attested to by "respected people."¹²⁶

It is no less probable, and more so in the evidential sense of that word, that addressing moral hazard accomplished something quite different: The existence of a moral hazard problem legitimated high rates and a suspicious approach to claims, and addressing that problem signified the morality of the insurance enterprise. These forgotten branches in the genealogy of moral hazard are at least as central to the constitution of the insurance enterprise as insurance incentives and loss ratios.

122. Cf. WEED, *supra* note 54, at 120 ("[T]he investigation of the causes and facts [in adjusting a claim] follows very nearly along the line of inquiry which ought to precede the acceptance of the risk. This is particularly true of the moral hazard.").

123. See Baker, *supra* note 110, at 1410-14 (describing the "immoral insured" and "public trust" claims stories).

124. See Pat O'Malley, *Legal Networks and Domestic Security*, 11 *STUD. IN L. POL. & SOC'Y* 171 (1991) (describing the roles of the residential property insurance adjuster in controlling moral hazard).

125. Thomas S. Chard, Manager of Fireman's Fund Insurance Company, explained the reason for the increase in insurance rates as follows:

No explanation offers except that we are contending against a *growing moral hazard*, a gigantic evil which now absorbs of underwriting assets from ten to fifteen million dollars annually, practically converting the business into a lottery, with a prize for every rascal.

Chard, *supra* note 67, at 30 (emphasis in original); see also A.F. DEAN, *Who Killed Cock Robin?*, in 3 *THE PHILOSOPHY OF FIRE INSURANCE*, *supra* note 76, at 163, 175 ("[T]he chief contributory cause [of fire waste] is moral rather than physical.").

126. HACKING, *supra* note 36, at 22-23.

F. *Moral Hazard into the Twentieth Century Insurance Trade*

By the conclusion of the nineteenth century, the morality of insurance itself was no longer seriously questioned. Fire and life insurance were established, prosperous features on the American economic landscape, and other forms of insurance were to have an equally prosperous future. The focus had shifted from insurance as a threat to public morality to insurance as a public good itself worth protecting.¹²⁷

The threat to this public good came not only from greedy insureds. The enactment of the valued policy laws and the Armstrong Commission's inquiry into the "extravagance and maladministration" and "artifice and double dealing" of life insurance companies¹²⁸ mark the formal recognition by the state legislatures that greed was a reciprocal feature of the insurance relationship. While insurance companies could be counted on to use their best efforts to control greedy insureds—because it was in the companies' interest to do so—they could not be counted upon to control themselves.

Moral hazard played a complementary role in efforts to control both sides of this relationship. On the insured side, moral hazard continued to be a conceptual lens underwriters used to decide who would be offered how much insurance. On the insurer side, moral hazard was a counterweight used to oppose state regulation in much the same way that the "rate story" of the immoral insured was used to justify high premiums. Whenever the autonomy of the "private" insurance enterprise came into question, insurers could be counted upon to explain how (immoral) insureds would take advantage of the proposed regulation to the detriment of the (moral) members of the public who depended upon strong insurance institutions.¹²⁹

Through all this, the basic understanding of moral hazard remained unchanged.¹³⁰ The term "moral hazard" retained both its character and

127. See, e.g., CAMPBELL, *supra* note 69, at 142-46 (decrying the link between insurance and crime and attributing it not to insurance per se, but rather to the practices of those in the insurance trade).

128. 10 REPORT OF THE JOINT COMMITTEE OF THE SENATE AND ASSEMBLY OF THE STATE OF NEW YORK APPOINTED TO INVESTIGATE THE AFFAIRS OF LIFE INSURANCE COMPANIES 346 (1906).

129. See Deborah A. Stone, *Promises and Public Trust: Rethinking Insurance Law Through Stories*, 72 TEXAS L. REV. 1435, 1443-44 (1994).

130. In a selective review of insurance writing from 1900 through 1960, I have detected no fundamental change in the understanding of moral hazard. Heimer's description of twentieth-century practices is consistent with this conclusion. See HEIMER, *supra* note 13, at 37-39 (discussing the practice of "casual underwriting" as the traditional manner of evaluating potential policyholders); *id.* at 43-48 (discussing the use of contract provisions to prevent insureds from fraudulently profiting from alleged losses). More recent insurance writing reflects an influence from neoclassical economists. See, e.g., C. ARTHUR WILLIAMS, JR. ET AL., *RISK MANAGEMENT AND INSURANCE* 14 (Preliminary 7th ed. 1995) (defining "moral hazard" as "the tendency of insurance to reduce incentives to prevent loss"). *But see* UNDERWRITING IN LIFE AND HEALTH INSURANCE COMPANIES 112 (Richard Bailey ed., 1985)

temptation senses. While moral hazard situations expanded along with the insurance enterprise, the available tools to manage moral hazard did not. Insurers continued to conduct moral hazard investigations¹³¹ and to try to prevent loss from producing a gain. To the nineteenth-century pantheon of incendiaries, swindlers, itinerants, and the heedless, twentieth-century insurance writers added delinquents,¹³² malingerers,¹³³ hypochondriacs,¹³⁴ people with bad credit,¹³⁵ and those who pursue “aspirational,” rather than “medically necessary,” therapy.¹³⁶

There is one notable change in the insurance literature. Earlier writers rarely provided any support for the proposition that applicants who deviated from (or were regarded as deviant by) conventional morality were a threat to the insurance enterprise. They seemed to regard this proposition as so obviously true that no demonstration was needed. Mid-twentieth-century insurance writers, in contrast, were careful to support their conclusions by reference to “demonstrated underwriting experience.”¹³⁷ Of course, nowhere is any of this demonstrated in any fashion that can be evaluated by an impartial observer, in the manner, say, of the RAND study of health insurance.¹³⁸ Underwriting guides and manuals from the period do little to dispel the suspicion that “demonstrated underwriting experience” was and is nothing more than the conclusion that, because the insurance company continues to make money, conventional moral

(defining “moral hazard” as “the likelihood that the proposed insured is making a deliberate attempt to conceal or misrepresent information that might result in an unfavorable underwriting decision”). The increasing influence of economists is one reason I stopped my analysis of the insurance literature at 1960.

131. See, e.g., FRANK JOSEPH ANGELL, *INSURANCE PRINCIPLES AND PRACTICES* 104-05 (1959) (describing the practice of using inspection reports to evaluate “the applicant’s habits, morals, and finances”); H.W. DINGMAN, *INSURABILITY: PROGNOSIS AND SELECTION* 190 (1927) (describing an “inspection service” which investigates the moral habits of applicants).

132. See Frederic R. Stearns, *The “Moral Hazard” in Risk Appraisal Delinquency*, 15 *INS. INDEX* 90, 93 (1953).

133. See G.F. MICHELbacher, *CASUALTY INSURANCE PRINCIPLES* 384-89 (2d ed. 1942).

134. See EDWIN J. FAULKNER, *HEALTH INSURANCE* 328 (1960).

135. See Jane Birnbaum, *A Poor Credit Rating May Affect Auto Policy*, *N.Y. TIMES*, Aug. 27, 1994, at 34.

136. See Steven S. Sharfstein & Carl A. Taube, *Reductions in Insurance for Mental Disorders: Adverse Selection, Moral Hazard, and Consumer Demand*, 139 *AM. J. PSYCHIATRY* 1425, 1427 (1982).

137. For example, Frederic R. Stearns wrote that

underwriting experience has demonstrated that potential delinquency may be present in individuals who conceal impairments, fail to answer questions truthfully, frequently change their jobs without consistent motive and explanation, often change their place of residence without clearly recognizable reason, show in their previous history emotional instability, recklessness, violence, shady business dealings, extra-marital relations, promiscuity, not well explained divorces and separations, accident-proneness, suicidal attempts, etc.

Stearns, *supra* note 132, at 93.

138. Manning et al., *supra* note 18 (documenting the RAND study).

distinctions reflect real differences in the loss-producing tendencies of the populations so distinguished.¹³⁹

II. The Economist's Moral Hazard

In the early 1960s, Kenneth Arrow was asked to analyze the economics of the growing health care sector of the U.S. economy. As Arrow observed, a striking aspect of health care was (and is) the degree to which insurance pays for medical services, especially within hospitals.¹⁴⁰ The centrality of medical insurance led Arrow into the insurance literature, where he encountered the concept of moral hazard. This is the path that, through the law and economics movement, brought the concept of moral hazard into the legal and policy debate. To understand the place of moral hazard in that debate, it is worth spending some time with Arrow and the economists who followed him.

Arrow reported the results of his “exploratory and tentative study” of medical economics in a 1963 article published in the *American Economic Review*.¹⁴¹ In that article, Arrow announced his support for government provision of health insurance.¹⁴² In explaining that support, Arrow addressed the “moral hazard” of insurance, which he explicitly defined as

139. See, e.g., G. WILLIAM GLENDENNING & ROBERT B. HOLTOM, PERSONAL LINES UNDERWRITING 69 (1977) (“The use of occupation as an underwriting variable is based partly on accumulated individual experiences of underwriting personnel and partly on presumptions about habits and characteristics of people in certain occupational groups.”); Regina Austin, *The Insurance Classification Controversy*, 131 U. PA. L. REV. 517, 534 (1983) (“However much the companies plead happenstance, insurance ‘risk’ classifications correlate with a fairly simplistic and static notion of social stratification that is familiar to everyone.”); Heimer, *supra* note 10, at 49 (“[I]nsurers simply consulted their prejudices and constructed their underwriting rules and investigation schedules accordingly.”); Deborah A. Stone, *The Struggle for the Soul of Health Insurance*, 18 J. HEALTH POL. POL’Y & L. 287, 296 (1993) (“The numerical rating system, and the underwriting guides and rating manuals it spawned, have all the trappings of scientific objectivity—medical terminology, elaborate matrices of diseases and point values, and numbers—but they often seem to be based as much on social prejudices and stereotypes as on empirical knowledge.”).

140. See Arrow, *Uncertainty*, *supra* note 4, at 958 (noting that “over half of all hospital expenses and about 35 percent of the medical payments of those with bills of \$1000 a year and over” are covered by insurance). The dominant third party payers historically have been Blue Cross and Blue Shield and commercial insurance companies. See Kenneth S. Abraham & Lance Liebman, *Private Insurance, Social Insurance, and Tort Reform: Toward a New Vision of Compensation for Illness and Injury*, 93 COLUM. L. REV. 75, 80 (1993) (observing that in the late 1980s, private health insurance, including Blue Cross and Blue Shield, and major medical insurance together paid roughly \$185 billion of the approximately \$220 billion in private insurance benefits paid annually). Today, of course, government payments have assumed equal if not greater importance. *Id.* at 83 (noting that Medicare and Medicaid provided the “lion’s share” of federally supported healthcare insurance in the late 1980s with \$159 billion in annual expenditures, followed by other federal and state insurance programs at \$40 billion annually and two federal disability insurance programs at \$35 billion annually).

141. Arrow, *Uncertainty*, *supra* note 4, at 944.

142. See *id.* at 961 (“The welfare case for insurance policies of all sorts is overwhelming. It follows that the government should undertake insurance in those cases where the market, for whatever reason, has failed to emerge.”).

“the effect of insurance on incentives.”¹⁴³ Arrow described that effect as occurring when “the event against which insurance is taken out” lies “in the control of the individual” who benefits from the insurance.¹⁴⁴ As Arrow explained, individuals may have little control over illness, but they do have control over which doctor to use, and they may base that decision upon a doctor’s willingness to use more costly medical services.¹⁴⁵ In the presence of health insurance, this control leads to two potential moral hazard effects: increased utilization of medical services and increased prices for those services.

In a comment on Arrow’s article published two years later, Mark Pauly challenged Arrow’s support for government insurance and ascribed it to a misunderstanding of the economics of moral hazard.¹⁴⁶ Pauly faulted insurance writers (and implicitly Arrow) for using “emotive words” and asserted “that the problem of ‘moral hazard’ in insurance has, in fact, little to do with morality.”¹⁴⁷ For Pauly, what Arrow and the insurance writers had called “moral hazard” was simply a rational response to a subsidized price. The social effect of the problem was that of the familiar prisoner’s dilemma:¹⁴⁸ The collectively rational strategy (restrain use) is dominated by the individually rational strategy (more use).¹⁴⁹ Pauly concluded that the market’s failure to provide broader health insurance reflected an inescapable need for “price rationing at the point of service”¹⁵⁰ so that people did not overconsume medical services.

Arrow responded to Pauly in a few pages published immediately following Pauly’s comment.¹⁵¹ Arrow first applauded Pauly’s insights into market incentives, but then took Pauly to task for “his exclusive emphasis” on those incentives.¹⁵² Arrow agreed “that the seeking of more medical care with insurance is a rational action on the part of the individuals if no further constraints are imposed,” but he went on to say that “[i]t does not follow that no constraints ought to be imposed or indeed that in certain contexts individuals should not impose constraints on themselves.”¹⁵³

143. *Id.*

144. *Id.*

145. *See id.*

146. Pauly, *Comment, supra* note 4, at 535 n.3.

147. *Id.* at 535, 531.

148. *See* DOUGLAS G. BAIRD ET AL., *GAME THEORY AND THE LAW* 48-49, 312-13 (1994) (providing a game-theoretical account of the prisoner’s dilemma). For a brief history of the prisoner’s dilemma, *see* PARADOXES OF RATIONALITY AND COOPERATION 3-4 (Richmond Campbell & Lanning Sowden eds., 1985).

149. *See* Pauly, *Comment, supra* note 4, at 534 (explaining that individuals are motivated to use “excess care” because the additional cost of insurance is distributed over other insurance holders).

150. *Id.*

151. Arrow, *Further Comment, supra* note 4.

152. *Id.* at 537.

153. *Id.* at 538.

Then, in a sharp passage, Arrow wrote: “Mr. Pauly’s wording suggests that ‘rational economic behavior’ and ‘moral perfidy’ are mutually exclusive categories. No doubt Judas Iscariot turned a tidy profit from one of his transactions, but the usual judgment of his behavior is not necessarily wrong.”¹⁵⁴ As Arrow put it, “[o]ne of the characteristics of a successful economic system is that the relations of trust and confidence between principal and agent are sufficiently strong so that the agent will not cheat even though it may be ‘rational economic behavior’ to do so.”¹⁵⁵ Thus, morality, “internalized” moral principles, has much to do with moral hazard.¹⁵⁶

Touché, one almost says on reading the exchange. But, without a concept of “character” or some other basis for identifying and discussing Arrow’s “internalized moral principles,” there is little that can be done with Arrow’s observation. In the thirty years since their exchange, Pauly’s criticism, and not Arrow’s response, has had the greater influence. Tellingly, the subsequent economics literature (including Arrow’s own contributions¹⁵⁷) exclusively addresses external incentives, not “internalized moral principles.” Indeed, despite Arrow’s pointed criticism, Pauly’s observation that moral hazard has little to do with morality has become the conventional wisdom. Before examining that wisdom, it is worth taking a closer look at the economics of moral hazard that Arrow, Pauly, and other economists have developed.

A. *The Basic Economics of Moral Hazard*

In broad outline, the moral hazard of economic theory is a denatured and more logically precise version of the temptation half of the insurance trade’s moral hazard. If the insurer’s answer to the insurance temptation could be captured in a slogan, it would be “never a gain from a loss.”¹⁵⁸

154. *Id.*

155. *Id.*

156. *Id.* Concerning the normative message contained in economic terms, Arrow has written:

Both the conditions of this optimality theorem and the definition of optimality call for comment. A definition is just a definition, but when the *definiendum* is a word already in common use with highly favorable connotations, it is clear that we are really trying to be persuasive; we are implicitly recommending the achievement of optimal states.

Arrow, *Uncertainty*, *supra* note 4, at 942. Arrow could not have been blind to the normative valence of “moral hazard”; his decision to use the term suggests a degree of comfort with that valence, as the exchange between Arrow and Pauly makes clear. Cf. Harold Demsetz, *Information and Efficiency: Another Viewpoint*, 12 J. LAW & ECON. 1, 7 (1969) (criticizing Arrow’s identification of moral hazard as a “special dilemma” and attributing it to “the people could be different” fallacy).

157. See, e.g., Kenneth J. Arrow, *Optimal Insurance and Generalized Deductibles*, 1974 SCANDANAVIAN ACTUARIAL J. 1.

158. See, e.g., AETNA GUIDE, *supra* note 50, at 157 (“The insured should never make money by a loss.” (emphasis omitted)).

The corresponding slogan for the economist would be "less loss from loss means more loss."

Let me explain. Assuming that money compensates for loss, it follows that insurance will cause a loss of a given magnitude to be *felt* by an individual insured as if it were a loss of lesser magnitude. After all, that is the very point of insurance.¹⁵⁹ The ratio of "actual" to "felt" loss in any particular situation will vary according to the extent to which insurance compensates for the "actual" loss.

Assuming further (I will return to all these assumptions) that people are rational loss minimizers who are in control of themselves and their surroundings, that taking care requires effort and is effective, and that insurance companies do not condition payment on a given level of care, it follows that people will respond to insurance by taking less care, and, therefore, incurring more "actual" (but not "felt") loss. Hence, less loss from loss means more loss. This conclusion, together with the assumptions from which it follows, is the essence of the economist's moral hazard.¹⁶⁰

In applying this analysis, economists make an important distinction between *ex ante* and *ex post* moral hazard.¹⁶¹ *Ex ante* moral hazard is the theoretical tendency for insurance to reduce the incentive to preserve property or life from loss, and it is akin to the arson or carelessness aspect of the fire insurance temptation problem.¹⁶² *Ex post* moral hazard is the theoretical tendency for insurance to reduce the incentive to minimize the cost of recovering from loss, and it is akin to the malingering aspect of the disability insurance temptation problem.¹⁶³ With *ex post* moral hazard, the "problem" is not an increase in the frequency of accidents, but rather an increase in the consumption of the benefits provided by insurance, such as paid time off in the case of disability insurance. *Ex post* moral hazard can still be captured in the slogan "less loss from loss means more loss,"

159. See An Acte conc[er]ning matters of Assurances, amongste Marchantes, 1601, 43 Eliz., ch. 12 (Eng.). The Act states:

[B]y meanes of whiche Policies of Assurance it comethe to passe, upon the losse or perishinge of any Shippe there followethe not the undoinge of any Man, but the losse lightethe rather easilie upon many, then heavilie upon fewe, and rather upon them that adventure not then those that doe adventure, whereby all Merchantes, sp[ec]iallie the younger sorte, are allured to venture more willinglie and more freelie

Id.

160. The leading articles setting out the economics of moral hazard are cited *supra* note 4.

161. See, e.g., Priest, *supra* note 1, at 1314 ("Moral hazard in the context of health insurance has been shown to represent a shift from *ex ante* allocative investments in care toward *ex post* investments in medical services which, given insurance, cost less at the margin.").

162. See George L. Priest, *The Current Insurance Crisis and Modern Tort Law*, 96 YALE L.J. 1521, 1547 (1987) ("Ex ante moral hazard is the reduction in precautions taken by the insured to prevent the loss, because of the existence of insurance.").

163. See *id.* ("Ex post moral hazard is the increase in claims against the insurance policy beyond the services the claimant would purchase if not insured.").

provided that the “loss” is understood to include the cost of recovering from the insured against event. While the *ex ante/ex post* distinction does not always work (for example, does an individual seek medical care to recover from a loss or to prevent loss?), it helps to frame some of the discussion that follows.

The most obvious difference between the economists’ and the insurers’ conception of moral hazard is the role of character in each. As I demonstrated earlier, even the insurers’ response to the “incentive” aspect of the moral hazard can be understood as an effort to make insurance less attractive to “moral hazards”—that is to say, to people with undesirable character. While Arrow clearly demonstrated some regard for character, character nevertheless has disappeared from the economists’ moral hazard analysis. In the process, moral hazard has become exclusively a property of insurance arrangements and not a property of the individuals who enter those arrangements.¹⁶⁴

A second, and related, difference occurs in the metamorphosis of the insurance “temptation” into an “incentive.” Where the insurance writers’ “temptation” evoked a confrontation between good and evil, the economists’ “incentive” evokes a cost-benefit calculation. Both temptation and incentive are matters of degree, but the concept “temptation” gives greater attention to the moral worth of the individual who responds (or not) to the temptation. “Temptation” also leads to a search for a trip point, the point up to which it is safe to go without concern that the individual will succumb to that temptation.¹⁶⁵ Hence, the fire insurer’s concern about “gain through loss.” That gain was a specific one: the ability to get more money from the insurance company upon the destruction of the insured property than through continued operation or sale of the property.¹⁶⁶ The economists’ “incentive,” in contrast, is a force that acts on a population.

164. What is left of character is addressed within the economic concept of adverse selection, a concept worthy of its own genealogical investigation (which will have to wait for another day). Adverse selection refers to the tendency for insurance to be purchased by people who are disproportionately likely subsequently to experience an insured-against event. See Michael Rothschild & Joseph Stiglitz, *Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information*, 90 Q.J. ECON. 629, 632 (1976) (noting that “those with high accident probabilities will demand more insurance than those who are less accident-prone”). Absent countervailing efforts by insurance companies, the result is that the insurance pool will consist disproportionately of “lemons”—people with undesirable risk characteristics. See George A. Akerlof, *The Market for “Lemons”: Quality Uncertainty and the Market Mechanism*, 84 Q.J. ECON. 488, 492-93 (1970).

165. A recent advertisement for Wausau in a trade publication targeted at risk managers and employee benefits administrators suggests that there remains much vitality in this understanding. The ad is an elaborate picture of a snake encircling an apple, with the copy: “Fake an injury. Trick the insurance company into paying. Collect. Tempting, isn’t it?” BUS. INS., Mar. 6, 1995, at 5.

166. While it is always difficult to prove a negative, in reviewing the nineteenth-century literature I found no indication that the “gain” the insurance writers were concerned about was the pre-loss savings attributable to reduced care.

For the economist, gain is a matter of degree, and, absent some counter-vailing incentive, insurance of any sort, in any amount, will change behavior.

B. *Universalizing Moral Hazard*

As Arrow and Pauly recognized in their 1965 exchange, the concept of moral hazard has far reaching application. In his comment on Arrow, Pauly pointed out that the concept applied to all forms of traditional insurance (automobile, marine, fire, health, etc.).¹⁶⁷ In response, Arrow generalized moral hazard even further by suggesting that it is potentially present in any principle-agent situation.¹⁶⁸ Subsequent writers, most notably Joseph Stiglitz, have worked out Arrow's insight (and those of their own) in rigorous analytical form.

As Stiglitz wrote in his most comprehensive analysis of moral hazard, "[a]most all economic relations are affected by risk, and by the problems of insurance and incentives to which this gives rise."¹⁶⁹ One of the most lasting contributions of the economics of moral hazard is likely to be this generalization. After Arrow and Stiglitz, "insurance" is not simply something provided by "insurance companies." Instead, "insurance" is provided any time that one party's actions have consequences for the risk of loss borne by another.¹⁷⁰

One familiar application of this insight appears in the literature on products liability. As George Priest recognized in his study of products warranties, a warranty is a form of insurance that manufacturers provide to consumers.¹⁷¹ The warranty means that the action of the consumer—use of a product that fails—will have an effect on the manufacturer (that is,

167. See, Pauly, *Comment*, *supra* note 4, at 531.

168. See Arrow, *Further Comment*, *supra* note 4, at 538.

169. Stiglitz, *supra* note 4, at 8.

170. See Holmström, *supra* note 4, at 75-91 ("It has long been recognized that a problem of moral hazard may arise when individuals engage in risk sharing under conditions such that their privately taken actions affect the probability distribution of the outcome.").

The discussion in the text ignores the risk pooling aspect of insurance. If we define "insurance" as requiring not only risk transfer but also risk pooling, some of my examples would not be "insurance." Limited liability, for example, distributes risk without pooling it. I am not sure that I agree that "insurance" must involve risk pooling. Regardless of the answer to that question, however, the economics of moral hazard depend only on the risk transfer aspect of insurance, not risk pooling. Thus, the question of whether limited liability "really" is a form of "insurance" does not affect the arguments made in this Article.

171. See Priest, *supra* note 1, at 1313 (noting that the problem of "an optimal division between the consumer and the manufacturer of allocative and insurance investments is identical conceptually to the problem of moral hazard which has been discussed extensively in insurance literature, in particular, in the context of medical insurance"); see also Epstein, *supra* note 1, at 646-47 (implying that product liability functions as insurance for consumers).

the expenditure of money to repair or replace the product).¹⁷² The more limited the warranty, the less insurance manufacturers provide to consumers. As Priest described, when tort law refuses to give legal effect to limits that manufacturers seek to place on their warranties, manufacturers are, in effect, required to provide more insurance to consumers than they wish.¹⁷³

Priest cited the economics literature for the proposition that insurance is inevitably accompanied by moral hazard and, from there, argued that a strict products liability regime would result in more personal injuries from products than a legal regime in which manufacturers and consumers are “free” to contract for the warranty they wish.¹⁷⁴ Other law and economics writers have made similar moral-hazard-based arguments in favor of contributory and comparative negligence rules,¹⁷⁵ in favor of the assumption of risk defense,¹⁷⁶ against awarding damages for pain and suffering,¹⁷⁷ and against what are claimed to be overly generous workers’ compensation benefits.¹⁷⁸ The insight underlying all these arguments is that liability and compensation regimes are forms of insurance. The more expansive the liability or compensation regime, the more insurance those who bear the costs of the regime provide to those who are eligible to receive the insurance benefits.

Universalizing moral hazard complicates this picture, however, because *limited* liability is also a form of insurance as writers who have examined the economics of shareholder liability and bankruptcy have recognized.¹⁷⁹ In nearly any relationship, each party to that relationship

172. See Priest, *supra* note 1, at 1308.

173. See *id.* at 1348 (“Courts have interpreted sales transactions to provide more extensive warranty protection to consumers than the manufacturers themselves have offered voluntarily.”).

174. See *id.* at 1351.

175. See, e.g., Richard S. Higgins, *Products Liability Insurance, Moral Hazard, and Contributory Negligence*, 10 J. LEGAL STUD. 111, 130 (1981) (justifying the doctrine of contributory negligence as a needed corrective to moral hazard).

176. See, e.g., Epstein, *supra* note 1, at 666 (“Assumption of risk is one way to prevent . . . moral hazard[] . . .”).

177. See, e.g., Jeffrey O’Connell, *Two-Tier Tort Law: Neo No-Fault & Quasi Criminal Liability*, 27 WAKE FOREST L. REV. 871, 888 (1992) (“The availability of pain and suffering damages . . . increases the wasteful and even fraudulent utilization of health insurance dollars in order to validate claims for pain and suffering.”).

178. See, e.g., W. Kip Viscusi, *Toward A Diminished Role for Tort Liability: Social Insurance, Government Regulation, and Contemporary Risks to Health and Safety*, 6 YALE J. ON REG. 65, 86 (1989) (noting that moral hazard problems with workers’ compensation programs are “most evident with respect to how soon workers return to work after suffering an injury”).

179. See, e.g., James R. Garven & Steven W. Pottier, *Incentive Contracting and the Role of Participation Rights in Stock Insurers*, 62 J. RISK & INS. 253, 253 (1995) (“Corporate limited liability creates a moral hazard by generating a payoff structure that rewards owners with the benefits of risky activities while penalizing them with only a portion of the costs.”); Kraakman, *supra* note 1, at 874 (referring to the “moral hazard” of limited liability in the context of corporate liability).

can act in a way that may have consequences for any other party to the relationship.¹⁸⁰ Holding one party liable for those consequences reduces the incentive of any other party in the relationship to avoid those consequences. Conversely, limiting one party's liability for those consequences reduces that party's incentive to avoid those consequences. Thus, products liability, workers' compensation and, indeed, most relationships present a multiple moral hazard problem.¹⁸¹ Priest, Epstein, and other legal economists rightly assert that expanding manufacturers' liability transfers risk from consumers to manufacturers and, thus, increases the insurance manufacturers provide to consumers.¹⁸² But limiting manufacturers' liability transfers risk from manufacturers to consumers and, thus, increases the insurance consumers provide to manufacturers. Put another way, if a strict products liability regime presents a consumer moral hazard problem, anything less presents a manufacturer moral hazard problem.¹⁸³

180. For an application of this principle to sexual relationships, see HEIMER, *supra* note 13, at 220-26, and to other nonmarket situations, including family relations, friendships, and employment, see Arnott & Stiglitz, *supra* note 13, at 179-80.

181. Some economists have referred to products liability situations as presenting a dual moral hazard problem. See, e.g., Russell Cooper & Thomas W. Ross, *Product Warranties and Double Moral Hazard*, 16 RAND J. ECON. 103, 104 (1985); Winard Emons, *Warranties, Moral Hazard, and the Lemons Problem*, 46 J. ECON. THEORY 16 (1988) (both discussing the double moral hazard problem created by consumer warranties); Paul Lanoie, *Occupational Safety and Health: A Problem of Double or Single Moral Hazard*, 58 J. RISK & INS. 80, 81-82 (1991) (describing the double moral hazard problem created by employers providing insurance benefits to their workers); see also Dorothy Golosinski & Douglas S. West, *Double Moral Hazard and Shopping Center Similarity in Canada*, 11 J. LAW ECON. & ORG. 456, 456-57 (1995) (listing various economic relationships which present a double moral hazard problem). Even the double moral hazard account is overly simplistic, however, because it ignores other parties with interests in the relationship, such as the manufacturer's liability insurer, the consumer's first party insurer(s), the product vendor, and the entities that set and enforce products safety standards. Where the product is used or consumed in the context of another relationship (e.g., employment or family), the situation is more complex. See Arnott & Stiglitz, *supra* note 13, at 180 (describing the effect that employer or peer monitoring of an individual has on an underlying double moral hazard).

182. See Epstein, *supra* note 1, at 646 (explaining that the historical justification for expanding manufacturers' liability is to shift risk to those with access to liability insurance); Priest, *supra* note 1, at 1298 (asserting that warranties act as insurance in that they shift the risk of repairing or replacing a defective product from the consumer to the manufacturer).

183. The argument that the "voluntary" nature of warranties makes them superior to the "forced" insurance provided by tort liability is unpersuasive for at least two reasons. First, the argument requires a vision of "freedom of contract" that conflicts with what we know about contracting behavior. See Eisenberg, *supra* note 14, at 213-15 (explaining how contracting parties are characteristically handicapped by limited information and limited information processing); Todd D. Rakoff, *Contracts of Adhesion: An Essay in Reconstruction*, 96 HARV. L. REV. 1173, 1237 (1983) (arguing that true freedom of contract cannot exist with the increasing use of adhesion contracts). Second, it ignores the manufacturer "moral hazard" problem presented in contracting. See Mark Geistfeld, *Manufacturer Moral Hazard and the Tort-Contract Issue in Products Liability*, 15 INT'L REV. L. & ECON. 241, 243 (1995) (arguing that a moral hazard arises from the ability of the manufacturer to take advantage of a consumer's ignorance of the true risks of defect in a product); cf. Hanson & Logue, *supra* note 1, at 166-69 (discussing the relative advantages of a tort regime over an insurance regime in efficiently allocating risk in proportion to an individual's degree of risk aversion).

As the products liability example suggests, the economics of moral hazard are relentlessly relational. While early insurance writers saw moral hazard at work only in the behavior of the people who buy insurance, Arrow and Stiglitz would see moral hazard at work in the behavior of insurance agents, adjusters, underwriters and, indeed, in every aspect of the insurance company. Similarly, while Epstein and Priest focus on the moral hazard affecting consumers, the economics of moral hazard point us toward manufacturers, retailers, their insurance companies, corporate and bankruptcy law, consumers' insurance companies, and even nonmarket relationships affecting products-related risks.

C. *Questioning Assumptions*

I will confess to having begun this project with the misperception that the one-sidedness of Epstein's and Priest's products liability analysis revealed a significant flaw in the economics of moral hazard. This misperception is attributable in part to the fact that moral hazard has largely been addressed in the law and economics literature as a problem that afflicts liability and compensation regimes which benefit workers and consumers, not as a problem that equally afflicts regimes more favorable to manufacturers and employers.¹⁸⁴ As we have seen, however, the economics of moral hazard are anything but one-sided.

Though this is pure speculation, I attribute the largely one-sided analysis in the law and economics literature to a phenomenon identified by the legal realists: that of the "givenness" of entitlements.¹⁸⁵ If we understand the initial entitlement of manufacturers and employers to leave manufacturers and employers free to impose the costs of products and work-related accidents on consumers and employees (which is arguably the position of the late nineteenth-century common law), then we will regard legal rules that "interfere" with that entitlement as "redistributions." What is it that these rules redistribute? The rules redistribute the "risks" and "costs" of accidents. What else fulfills that function? Insurance. Thus, while the insurance provided in the redistribution of entitlements is analyzed, the insurance provided in the "initial" distribution is ignored.

Once the relational nature of the economics of moral hazard is appreciated, insurance and (its evil twin!) moral hazard are instantly visible in any set of entitlements. But translating that vision into a plan for action is a serious problem for at least two reasons. The first reason is theoretical, and will receive no further attention here: Because of the relational nature

184. A recent exception to this generalization is Geistfeld, *supra* note 183, at 243 (proposing that manufacturers benefit from moral hazards in their ability to hide defects from consumers).

185. See, e.g., Robert L. Hale, *Coercion and Distribution in a Supposedly Non-Coercive State*, 38 POL. SCI. Q. 470, 472-77 (1923) (demonstrating the coercive effects of entitlements).

of insurance and moral hazard, entitlements will inevitably present a multiple moral hazard problem that requires complex, iterative game theory techniques to model. The second reason is empirical: Once the modelling hurdle is surmounted, there remains the further hurdle of applying that model to the world. As careful economists acknowledge, the economics of moral hazard depend on a number of simplifying assumptions about the nature of the social world and the people who construct and inhabit it. If these assumptions do not fit the situation under analysis, there is good reason to doubt that behavior will be affected in the way that the theoretical model predicts.

The assumptions underpinning the economics of moral hazard include the following:

- 1) money compensates for loss;
- 2) people are rational loss minimizers;
- 3) taking care requires effort;
- 4) taking care is effective;
- 5) people with insurance have control over themselves and their property; and
- 6) insurance payments are not conditioned on a given level of care.¹⁸⁶

Taking these assumptions into account, the careful claim with regard to the "moral hazard" of insurance is not simply that "insurance increases loss." The careful claim is that *to the extent that* money compensates for loss, insurance against loss may reduce the incentive to take care,¹⁸⁷ which

186. For a recent, relatively accessible paper that sets out these assumptions (albeit not in such a precise form), see Ralph A. Winter, *Moral Hazard and Insurance Contracts*, in CONTRIBUTIONS TO INSURANCE ECONOMICS 61, 61-63 (Georges Dionne ed., 1992).

The statement of assumptions in the text is directed at *ex ante* moral hazard. The assumptions can be restated to fit the *ex post* context as follows:

1. Money compensates for loss. In the *ex post* context, the "loss" sought to be avoided by "care" is the cost of recovery. Thus, this assumption might be reformulated as "recovery costs are monetary."
2. People are rational loss minimizers. This assumption is directly applicable in the *ex post* context, provided that "loss" is understood to include the costs of recovery.
3. Taking care requires effort. In the *ex post* context, "care" means choosing a lower cost loss recovery and "effort" means that there is some tradeoff involved in that choice. Another way to say the same thing is that the person making the choice between a higher and lower cost recovery prefers the higher cost one.
4. Taking care is effective. Choosing a lower cost loss recovery reduces the costs of loss. (This may seem axiomatic, but it is not. Think of a situation in which the lower cost loss "recovery" choice is "do nothing" which then results in greater loss later).
5. Individuals have control over themselves and their property. Individuals who suffer losses are in control of what they do to recover from loss.
6. Insurance payments are not conditioned on a given level of care. Insurance payments are not conditioned on how people recover from loss.

187. Cf. Ehrlich & Becker, *supra* note 4, at 643 (using economic theory to suggest that providing insurance may, in limited circumstances, increase the care that an insured individual takes).

may increase the amount of loss. But the amount of loss will increase *only when* (1) the individuals who are insured can control the level of care, (2) insurance is not conditioned on care, (3) taking care actually reduces loss, and (4) those who are insured engage in rational loss minimization.

The empirical validity of these assumptions is open to doubt. Indeed, a moment's reflection is sufficient for anyone to imagine situations in which each of the assumptions would be violated. Nevertheless, when making policy choices I am prepared for normative reasons to act, until proven otherwise, as if people are rational loss minimizers¹⁸⁸ and that taking care is effective.¹⁸⁹ In addition, I do not see any empirical basis for an extended quarrel with the proposition that taking care requires effort.¹⁹⁰ But, the remaining three assumptions—that money compensates for loss, that insured individuals are in control, and that insurance is not conditioned on care—seem sufficiently doubtful in important situations that they should be understood as setting real limits on a moral hazard based legal or policy analysis.

1. Money cannot compensate for many losses.—Challenging the assumption that money compensates for loss is standard fare in first year law school torts class. Of course, we use money as compensation all the time because money is usually all that we have to use and because deterrence, and not just compensation, is at stake. So we hope and try and often manage to believe that the threat of monetary loss deters harm. It is easy

188. This assumption actually conflates two distinct assumptions—the rational actor assumption and the risk-averse individual assumption. See Stiglitz, *supra* note 4, at 6 (discussing the centrality of the risk-aversion assumption). For a recent statement of why, as a normative matter, we should be reluctant to challenge these assumptions, see Edward J. McCaffery, *Why People Play Lotteries and Why It Matters*, 1994 WIS. L. REV. 71.

There is an enormous amount of literature on the cognitive and other limits of the rational choice assumption that underlies microeconomic theory. See, e.g., NORTH, *supra* note 14, at 3-4 (examining the role institutions play in defining and limiting the set of choices available to individuals); Eisenberg, *supra* note 14, at 213-25 (explaining how contracting parties often violate the rational choice model of contract construction due to limits of cognition); Ellickson, *supra* note 14, at 25 (arguing that the rational-actor analysis would benefit from “more realism about both human frailties and the influence of culture”). I do not mean to slight that literature or to suggest that one should always act as if people were rational loss minimizers. I mean simply to leave the well-known debate on the limits of rational choice outside this essay in order to focus on other aspects of the law and economics analysis that have received less attention.

189. For one example of what happens when people no longer believe taking care is effective, see 1 THUCYDIDES, *HISTORY OF THE PELOPONNESIAN WAR*, at BK. 2, CHS. 48-54, at 124-29 (B. Jowett trans., Oxford Clarendon Press 1881) (describing the breakdown of Athenian society during the plague). The belief that taking care is effective may be what Nietzsche called a “necessary” error. See FRIEDRICH NIETZSCHE, *THE GAY SCIENCE* 147 n.37, 245-46 (Walter Kaufmann trans., Vintage Books 1974) (1887).

190. Cf. Shavell, *supra* note 4, at 546-49 (offering theoretical proof that the incentive effect of insurance disappears as the cost of taking care approaches zero).

to see why insurance, which reduces *monetary* loss, might threaten this deterrence picture.¹⁹¹

The assumption that money compensates for loss is not categorically wrong; it is only partially wrong, and less so in some situations than others. For example, money surely replaces money. It is also a pretty good substitute for investment property and inventory (although the costs of proving and collecting a loss have always been positive in any world I have lived in).¹⁹² Money also will rebuild, and might even replace, a home. But money cannot restore the sense of security lost when a storm destroys a home or when a thief breaks in. And money cannot replace a parent or a child, or sight or health, or, indeed, much of what is important in life.

If money does not fully compensate for loss, then liability and other insurance arrangements will have less of an incentive effect than the economic model would predict.¹⁹³ Pain and other nonfinancial aspects of bodily injury, for example, can be understood in insurance terms as an ineluctable, nonmonetary deductible or coinsurance “payment.” Thus, choosing between a true strict liability rule and a negligence rule for products-related injuries does not present a choice between “complete” and “partial” insurance for the consumer, but rather a choice between two forms of partial insurance. For the manufacturer, in contrast, money does

191. Indeed, economists describe an inevitable insurance-deterrence tradeoff that is attributable to moral hazard. *See, e.g.,* Stiglitz, *supra* note 4, at 6 (“[T]he more and better insurance that is provided against some contingency, the less incentive individuals have to avoid the insured event, because the less they bear the full consequences of their actions.”); *see also* Michael Spence & Richard Zeckhauser, *Insurance, Information, and Individual Action*, 61 AM. ECON. REV. PAPERS & PROCEEDINGS 380, 385 (1971) (describing how the insurer seeks “to achieve the optimal tradeoff between the conflicting goals of furthering risk spreading and providing appropriate incentives”).

192. Thus, the common observation in the law and economics literature that the tort system is a no-deductible compensation system is simply not true. *See, e.g.,* Priest, *supra* note 1, at 1309-13 (exploring the idea of consumer product warranties as pseudo-insurance policies). The fact that an accident may sometimes decrease the marginal utility of money does not affect this analysis in any important way. In considering ex ante moral hazard effects, the proper inquiry is not “how much will it cost to compensate for this injury,” but rather, “how good is the compensation available ex post as compared to the situation ex ante.” The fact that a spinal injury will change my taste for yachting hardly reduces my incentive to avoid a spinal injury. *See generally* Mark Geistfeld, *Placing a Price on Pain and Suffering: A Method for Helping Juries Determine Tort Damages for Nonmonetary Injuries*, 83 CAL. L. REV. 773, 830-32 (1995) (calling for an ex ante approach to pain and suffering and criticizing the traditional law and economic analysis of tort compensation).

193. In the ex post context, the assumption that “money compensates for loss” would be restated as “recovery costs are monetary.” Clearly, not all costs of recovery from loss are monetary. Think of waiting in a doctor’s office in the context of health insurance or the hassle of negotiating with contractors in the context of homeowners insurance. Unlike the violation of the assumption that money compensates for loss in the ex ante situation, the violation of the assumption that recovery costs are monetary in the ex post context is likely to *increase* the incentive effects of insurance. Because insurance pays the monetary costs of recovery, *and only those monetary costs*, people with insurance will spend insurance money in order to save their own time and trouble.

fully compensate for loss; the manufacturer's loss, after all, is not pain and suffering, but simply the money that must be paid to defend and settle the liability claim. As a result, the "insurance" provided to manufacturers by consumers in the form of limits on liability may well present a greater moral hazard (for manufacturers) than does the "insurance" provided to consumers by manufacturers in the form of liability. Thus, the economics of moral hazard do not support a reduction in manufacturers' liability.¹⁹⁴

2. *The people with insurance are only sometimes in control.*—For insurance to reduce care, the people who stand to benefit from the insurance must be capable of modifying the behavior that matters. Yet, those who suffer losses are not always in control of their behavior. Even in the paradigmatic case of automobile accidents, the insured driver is only in partial control. Automobile design, road design, and traffic safety laws are just a few of the many institutionally controlled "causes" that lie outside the control of any individual driver. Other types of insured-against events are subject to a similar analysis.¹⁹⁵

Like the assumption that money compensates for loss, the assumption that people with insurance are in control is "wrong" in varying degrees in different circumstances.¹⁹⁶ To the degree this assumption is violated, moral hazard can become a sophisticated form of victim blaming.¹⁹⁷ If the people exposed to the insurance incentive are not in control of the behavior that matters, then reducing the insurance incentive will impose a cost on those people while providing little benefit in the way of reduced accidents.¹⁹⁸ Indeed, to the extent that the insured person is not in

194. This is not to say that there might not be other reasons for preferring less than complete strict liability in, for example, design defect cases. See, e.g., James A. Henderson, Jr., *Judicial Review of Manufacturers' Conscious Design Choices: The Limits of Adjudication*, 73 COLUM. L. REV. 1531, 1546-47 (1973) (raising legal process objections to strict liability for generically dangerous products).

195. For example, the beneficiaries of workers' compensation use equipment that they did not make and work in places they did not design and do not control. Similarly, the beneficiaries of social welfare programs such as unemployment insurance and welfare have no control over local employment conditions or the macroeconomic forces that produce those conditions.

196. For a description of ways in which insurance companies vary the amount of insurance offered according to the control of the insured, see HEIMER, *supra* note 13, at 194-95.

197. See Richard Abel, *A Critique of Torts*, 37 UCLA L. REV. 785, 791-806 (1990) (discussing victim blaming and other perils of tort law).

198. Once again, the ex post situation differs. As health economists have long recognized, the relevant post-loss decisionmaker is not always the insured person. See, e.g., Arrow, *Uncertainty*, *supra* note 4, at 961-62. Doctors, for example, make important decisions in the context of health and disability insurance claims; contractors make important decisions in the context of homeowners insurance claims; and lawyers and doctors make important decisions in the context of automobile liability insurance claims.

In the ex post situation, violating the assumption that the insured is in control is unlikely to mean that insurance has no effect on claiming behavior. In contrast to the usual ex ante situation, the incentives of third parties who have control in the ex post situation are directly affected by insurance held

control of the loss producing behavior, reducing the amount of insurance simply shifts the costs of loss to the unlucky; precisely the opposite of what insurance institutions are designed to do.

In the liability context, reducing the insurance provided by the tort system may do more than shift the costs of loss to the unlucky; it may also increase accidents, once again because of the moral hazard of limited liability. If, for example, employers have a greater ability to prevent accidents in the workplace than workers, then the insurance that workers provide to employers (in the form of limited liability for workplace accidents) would present a greater moral hazard than would the insurance that employers provide to workers (in the form of liability for workplace accidents). Similarly, if manufacturers have more control over the safety of their products than consumers, the insurance the consumers provide to manufacturers (in the form of limited liability for products accidents) would present a greater moral hazard than would the insurance that manufacturers provide to consumers (in the form of liability for those accidents). Thus, the moral hazard of reducing workers' compensation benefits or restricting products liability may well increase workplace or products injuries more than the moral hazard of increasing those benefits or expanding that liability.

3. *Insurance is often conditioned on "care," especially in the ex post context.*—While perfect information does not exist, there are at least a few situations in which the available information is good enough to enable an insurer to condition insurance payments on a given level of care.¹⁹⁹ Examples include requirements for anti-theft devices, smoke alarms, and

by others. See, e.g., Richard J. Butler et al., HMOs, Moral Hazard and Cost Shifting in Workers' Compensation 1 (unpublished manuscript, on file with the *Texas Law Review*) (finding that "doctors in HMOs have a greater tendency to classify claims as compensable under workers compensation than do other physicians" and explaining that result as due to insurance incentives). Indeed, the managed health care movement is based on the assumption that such third-party incentives—sometimes referred to as a "moral hazard" as well—have more effect on health care utilization than does the price paid by the individual insured. The Health Care Study Group, *Understanding the Choices in Health Care Reform*, 19 J. HEALTH POL. POL'Y & L. 499, 512 (1994) (explaining that costs are controlled by "a conservative style of practice that results from organizational incentives for economy"). Thus, the ex post violation of the "control" assumption will not necessarily reduce the incentive effect of insurance (although it may make the operation of that incentive more complex).

199. The assumption that insurance payments are not conditioned on care is a stand-in for the less intuitively understandable assumption of imperfect information. See Stiglitz, *supra* note 4, at 5 ("Moral hazard problems arise when there is imperfect information concerning the actions of [those] who purchase insurance, because those actions cannot be perfectly monitored and the insurance contract cannot specify all of the actions which the insured is to undertake." (citation omitted)); see also Holmström, *supra* note 4, at 74 ("The source of this moral hazard . . . is an asymmetry of information among individuals that results because individual actions cannot be observed and hence contracted upon.").

sprinkler systems²⁰⁰ and, after a loss, conditioning insurance claim payments on upgrading the security of the home or automobile.²⁰¹ To the extent that insurers can control the care that insureds take (or, condition payment on care which is nearly the same thing) there is less chance that extending insurance will increase loss.²⁰²

Even when insurance is not conditioned on the care taken to prevent a loss, payment often can be conditioned on what is done to recover from the loss. For example, nearly every form of insurance is sold (or provided by the government) with some limits on the manner in which an insured may recover from loss. For example:

- liability insurance gives the insurer the right to defend and settle insured claims;
- disability insurance requires the insured to be under the care of a doctor (and, increasingly, obligates insureds to undergo retraining and other forms of rehabilitation);
- property insurance pays insureds who pocket the proceeds less than insureds who repair or replace the damaged property and also requires insureds to take steps to mitigate their losses;
- unemployment insurance requires the eligible unemployed to look for work; and
- health insurance contains a wide variety of controls on utilization.

Though there are exceptions, these general controls over an insured's ability to recover loss reflect the widespread agreement that insurance has a significant effect on what people do to recover from loss.²⁰³ Such

200. For a discussion of insurance arrangements designed to increase ex ante caretaking, see Donald R. Deere, *On the Potential for Private Insurers to Reduce the Inefficiency of Moral Hazard*, 9 INT'L REV. L. & ECON. 219 (1989). For a discussion of contracting on care in the fire and marine insurance industry, see HEIMER, *supra* note 13, at 61, 202. For an argument that insurance companies *should* contract on care in order to reduce moral hazard, see Shavell, *supra* note 4, at 550-61.

201. See O'Malley, *supra* note 124, at 177 (describing how home insurance adjusters condition claim payments on security upgrades). The head of an automobile insurance claim department in a South Florida insurance office confirmed that similar practices are common in the automobile insurance industry. Interview with anonymous insurance company officer, in Coral Gables, Fla. (April 1995) (on file with author).

202. As Ralph Winter has recently argued, the economics of moral hazard under conditions in which the insurance company can contract on some level of care are not yet developed even in the theoretical literature. See Winter, *supra* note 186, at 88. Legal economist Seth Chandler has recently taken steps in that direction. See Seth J. Chandler, *The Interaction of the Tort System and Liability Insurance Regulation: Understanding Moral Hazard*, 2 CONN. INS. L.J. 91, 93-94 (1996) [hereinafter Chandler, *Interaction*]. Using game theory and computer-assisted mathematical modelling, Chandler demonstrates that if insurers can control the level of care their insureds take, they lower the chances that extending insurance will result in increased loss. See Seth J. Chandler, *Visualizing Moral Hazard*, 1 CONN. INS. L.J. 97 (1995) [hereinafter Chandler, *Visualizing*].

203. This is likely to be because, as explained in notes 193 and 198, in the ex post context, the violation of the assumptions underlying the economist's moral hazard will not reduce the incentive

controls also reflect widespread agreement, at least among insurers, that insurance institutions often can manage that effect.²⁰⁴ This latter point is important: If insurance institutions can manage insurance incentives, then expanding the reach of insurance will not necessarily increase loss.²⁰⁵ Indeed, and this is a crucial point, the success of insurers in managing insurance incentives may well mean that the most important "moral hazard" effect is not increased loss, but rather increased social control.²⁰⁶

Recent developments in health insurance illustrate this point. Even as economists have prescribed more self-reliance (deductibles and coinsurance) as the solution to the moral hazard of health insurance,²⁰⁷ some insurers have chosen social control.²⁰⁸ Health maintenance organizations

effect of insurance. Ex post, the "loss" that is affected by insurance is the cost of recovery. See *supra* note 186. The violation of the assumption that the insured person is in control does not reduce the incentive effect of insurance because those who are able to control the cost know about the existence or nonexistence of insurance: bodyshops, contractors, doctors, lawyers, and so on. Similarly, the violation of the assumption that recovery costs are monetary will only increase the incentive effect of insurance. If there are additional, nonmonetary costs of recovery, the insured person will be less likely to exercise care in reducing the monetary costs of recovery. (The same phenomenon occurs when there are covered and uncovered costs. Think of the manufacturer who pressures a liability insurer to settle a case quickly in order to avoid the negative publicity of a trial.)

204. See HEIMER, *supra* note 13, at 201-07 (discussing examples of conditions on insureds who seek to recover from loss in various lines of insurance).

205. The costs of administering the insurance scheme are not addressed in this analysis. Considering such costs would complicate the analysis without changing the basic thrust. It is possible that reducing benefits may reduce administrative costs, but it also possible that reducing benefits may not (if, for example, there are economies of scale in claims handling). Arrow believed that there are substantial economies of scale in insurance arrangements. See Arrow, *Uncertainty*, *supra* note 4, at 961. To the extent that administrative costs are substantial, there may be some social loss in insurance schemes, but this and other limitations on the standard assumption of actuarially fair insurance are beyond the scope of this analysis. My own admittedly impressionistic view is that, at least in the personal injury context, people are sufficiently risk averse that even substantial departures from actuarial fairness will not disrupt insurance markets (as long as the departures are more or less uniform among the insurance providers in that market, otherwise there would be adverse selection effects that are also beyond the scope of this analysis).

206. The theme of insurance and social control is under exploration in important work conducted by scholars working in the law and society tradition. See, e.g., O'Malley, *supra* note 124, at 171 (discussing the role of insurance adjusters in enforcing household security); Nancy Reichman, *Managing Crime Risks: Toward an Insurance Based Model of Social Control*, 8 RES. L. DEVIANCE & SOC. CONTROL 151, 152 (1986) (describing how insurance is "increasingly integrated into the processes and practices of crime control"); Jonathan Simon, *In the Place of the Parent: Risk Management and the Government of Campus Life*, 3 SOC. & LEGAL STUD. 15, 29-31 (1994) (noting that potential liability has led campuses to take a risk management approach to reduce loss); see also HEIMER, *supra* note 13, at 184-93 (discussing the organizational solutions that surety and fidelity bonding companies have applied to the problem of insuring reactive risk).

207. See, e.g., MARTIN FELDSTEIN & JONATHAN GRUBER, A MAJOR RISK APPROACH TO HEALTH INSURANCE REFORM 25 (National Bureau of Econ. Research Working Paper No. 4852, 1994) (advocating health insurance policies with a 50% coinsurance rate and a 10% of income limit on out-of-pocket expenditures); MANNING & MARQUIS, *supra* note 1, at 31 (concluding that a coinsurance rate of 55% would balance the marginal gain from increased risk pooling against the marginal loss from an increase in moral hazard).

208. Cf. STARR, *supra* note 20, at 429, 428-49 (describing "a general movement throughout the health care industry toward higher levels of integrated control"). As Starr notes, increased social

reduce the marginal price consumers pay for medical services and, by controlling both doctors and patients, deliver a package of medical services at a lower cost than their traditional fee-for-service indemnification competition.²⁰⁹ In effect, HMOs have accepted the “hazard” that lower prices would increase utilization and have managed that hazard by controlling utilization. It is as if a fire insurer agreed to cover all loss from fire, whatever the cause, and then the insurer so successfully managed arson and other hazards that it was able to offer lower premiums.²¹⁰

4. *Summing up.*—As this discussion has suggested, ignoring the assumptions underlying the economics of moral hazard can produce profoundly unrealistic expectations about the effect of real world insurance on real world behavior. Indeed, the failure to consider these assumptions, together with the mistake of equating insurance and redistribution, explains how the economics of moral hazard have been used to systematically favor the interests of manufacturers and employers over the sick and the injured. The mistake of equating insurance and redistribution results in a disproportionate focus on the hazards of compensating injured consumers and workers as opposed to the hazards of not compensating them. The mistake of assuming that money compensates for loss and that the insured is in control of his situation results in the exaggeration of the hazards of that compensation. And, the mistake of ignoring institutions leads to the conclusion that the only solution for these exaggerated hazards is less protection for the sick or injured (which, of course, means less liability and lower insurance premiums for manufacturers and employers).

D. *Measuring Moral Hazard*

Claims about moral hazard assert the existence of relationships that involve huge sums of money and which ought to be observable through social statistics. It is not surprising, therefore, that measuring moral hazard has become a distinct branch of empirical work, especially among econometricians. As the shakiness of the assumptions underlying *ex ante* moral hazard in the personal injury context suggest, however, the results

control does not necessarily mean lower overall system costs; the increasingly integrated medical enterprises may use the social control to extract higher profits. *Id.* at 429.

209. *See id.* at 383 (“The record of the Kaiser Health Foundation suggested it was possible to provide high quality prepaid health care at 20 to 40 percent lower cost than fee-for-service medicine.”).

210. Heimer reports that this is close to what the Factory Mutual insurance organizations did in the nineteenth century. *See* HEIMER, *supra* note 13, at 61, 61-67 (reporting that the Factory Mutuals were founded “specifically to encourage and reward loss prevention”). I do not mean by this description to suggest that HMOs have delivered on all that they have promised. Indeed, there is some evidence to the contrary. *See, e.g.,* FELDSTEIN & GRUBER, *supra* note 207, at 13 (discussing the “deadweight loss that results from the excessive consumption of health care services induced by the very low marginal cost of care under existing insurance policies”).

of empirical work in this area have called into question the effect that insurance actually has on the behavior of individuals who are exposed to injury. Results regarding ex post moral hazard point in the opposite direction, but not in the unequivocal fashion that the moral hazard theory would predict.

1. *Measuring Ex Ante Moral Hazard.*—There is no strong evidence that insurance reduces the level of care individuals take to prevent bodily injury. Research on accidents has studied the effect that switching from a tort law to a no-fault compensation system has on automobile accidents and the effect that increasing workers' compensation benefits has on industrial safety.

a. *No-fault automobile insurance.*—Neoclassical economic theory suggests that switching from third-party liability to no-fault insurance would increase accident rates.²¹¹ In insurance terms, eliminating liability results in complete third-party liability insurance. Because drivers would no longer be responsible for their harm to others, they would in theory have less incentive to be careful. In the early 1980s, Elisabeth Landes announced that she had empirical proof of this hypothesis,²¹² but later research criticized Landes's report and contradicted her findings.²¹³ A recent re-analysis of these studies concludes that "no fault has a small but significant adverse incentive effect" on automobile accidents.²¹⁴ The report uses the word "significant" in the technical sense, which means only that the effect of no-fault insurance does not result from chance or sampling error; it does not mean that the effect is "large" or "powerful" (which it is not).²¹⁵

211. See, e.g., Elisabeth M. Landes, *Insurance, Liability, and Accidents: A Theoretical and Empirical Investigation of the Effect of No-Fault Accidents*, 25 J.L. & ECON. 49, 60-62 (1982) (examining empirical evidence of higher accident mortality rates in states that have switched to no-fault insurance schemes).

212. *Id.* at 65.

213. See U.S. DEP'T OF TRANSP., COMPENSATING AUTO ACCIDENT VICTIMS: A FOLLOW-UP REPORT ON NO-FAULT AUTO INSURANCE EXPERIENCES (1985); Paul S. Kochanowski & Madelyn V. Young, *Deterrent Aspects of No-Fault Automobile Insurance: Some Empirical Findings*, 52 J. RISK & INS. 269 (1985); Paul Zador & Adrian Lund, *Re-Analyses of the Effects of No-Fault Auto Insurance on Fatal Crashes*, 53 J. RISK & INS. 226 (1986).

214. J. David Cummins & Mary A. Weiss, *The Stochastic Dominance of No-Fault Automobile Insurance*, 60 J. RISK & INS. 230, 233 (1993); see also Frank A. Sloan et al., *Tort Liability Versus Other Approaches for Deterring Careless Driving*, 14 INT'L REV. L. & ECON. 53, 56 (1994) (reaching a similar conclusion while acknowledging that the United States does not present a good test of no-fault insurance).

215. See Cummins & Weiss, *supra* note 214, at 233 (using the term "significant" in the sense of "statistical significance"); cf. DONALD N. MCCLOSKEY, *THE RHETORIC OF ECONOMICS* 156 (1985) (describing "the abuse of the word 'significant' in connection with statistical arguments in economics").

Recent studies on the effect of the No-Fault Act adopted in Quebec in 1978 suggest that the slight increase in fatal accidents in Quebec in the year following that act may have resulted from insurance incentives attributable to the Act.²¹⁶ It is difficult to draw much of a conclusion from these studies, however, because of the complexity of the Quebec situation and the disagreements between the analysts as to how to evaluate the effects of the Act. If there is an insurance effect, the author of one of the studies regards the “adverse selection” effect of the act (that is, riskier drivers entering the insurance pool) as much more significant than any moral hazard effect,²¹⁷ and the author of the other study (which did not control for adverse selection) estimates the overall effect of the Act as being only half that of the decrease in the drinking age from twenty-one to eighteen.²¹⁸

Attention to the “money compensates for loss” and “control” assumptions explains these results. In the case of automobile accidents, money does not fully compensate for loss because the potential loss in an automobile accident is not only harm to someone else, but also harm to the insured driver. While, from the perspective of the insured driver, a liability loss may be fully compensable by insurance money (or nearly so), self-injury is not. Moreover, the insured driver is not fully in control. Automobile designers and manufacturers, highway safety engineers, alcohol dispensers, legislators considering drunk driving laws, and police, not to mention other drivers, all contribute to the chances that an insured driver will have an accident, yet none of them is within the control of the insured. Automobile accident rates may go up or down, but not because of the ex ante moral hazard effect of automobile insurance, at least not in any important sense.

b. Workers' compensation.—Neoclassical economic theory suggests that increasing workers' compensation benefits would reduce worker

216. See Rose Anne Devlin, *Liability Versus No-Fault Automobile Insurance Regimes: An Analysis of the Experience in Quebec*, in CONTRIBUTIONS TO INSURANCE ECONOMICS 499, 512-13 (Georges Dionne ed., 1991); Marc Gaudry, *Measuring the Effects of the No-Fault 1978 Quebec Automobile Insurance Act with the DRAG Model*, in CONTRIBUTIONS TO INSURANCE ECONOMICS, *supra*, at 471, 492. As Gaudry describes the Act, it is clear that increases in property damage and nonfatal bodily injury reports cannot be attributed to an ex ante moral hazard effect because of the greatly increased incentive to report such damage and injury. *Id.* at 483-84; *cf.* Butler & Worrall, *supra* note 1, at 191 (making this point in the context of workers' compensation claims).

217. See Gaudry, *supra* note 216, at 492-93. Gaudry concludes that “very little of significance, if anything, can be attributed to the no-fault feature proper of the law.” *Id.* at 471. *But see* Devlin, *supra* note 216, at 499 (concluding that driving care fell as a result of no-fault). Gaudry concludes that there was some moral hazard effect attributable to previously uninsured drivers being forced to carry insurance, but that the most important insurance effect results from a decline in the average quality of the stock of drivers attributable to the flat pricing of insurance under the Act. See Gaudry, *supra* note 216, at 492-93.

218. See Devlin, *supra* note 216, at 509-10.

incentives to be careful and, therefore, increase workplace accidents.²¹⁹ The empirical literature reports that the number of workers' compensation claims in fact has increased as benefits increased, but that serious accident rates have not.²²⁰ Increasing benefits gives workers a greater incentive to report an accident, but increasing benefits does not reduce workplace safety.²²¹

Attention to the "money compensates for loss" and the "insured is in control" assumptions helps explain this result as well. Money does not fully compensate workers for bodily injury, and, under the prevailing model of industrial organization, workers do not control the design of their working environment.²²² Thus, increasing benefits provides limited incentive for workers to be careless, and, even if it did, worker carelessness is only one part of the workplace safety picture.

c. Where else to look.—If attention to the assumptions underlying ex ante moral hazard would have predicted these workers' compensation and no-fault auto insurance findings, attention to these assumptions might suggest other places where insurance against loss would increase ex ante loss. A good place to begin would be situations in which the loss itself is financial, such as liability for damages in situations in which the potentially liable party does not face the risk of personal injury.

Limited liability distributes to people who are injured the costs of an injury-producing activity. As discussed above, limited liability can be understood as a form of insurance which the injured provide to others engaged in an injury-causing activity.²²³ Once limited liability is so understood, the workers' compensation studies actually vindicate a more sophisticated ex ante moral hazard analysis.

Increasing the level of wage-loss benefits paid by workers' compensation has two simultaneous potential moral hazard effects—it increases the insurance provided to workers and it decreases the insurance provided to employers.²²⁴ Because the assumptions underlying the ex ante moral haz-

219. See MICHAEL J. MOORE & W. KIP VISCUSI, *COMPENSATION MECHANISMS FOR JOB RISKS* 123 (1990) ("More generous benefits will lead workers to decrease their level of care . . .").

220. See Butler & Worrall, *supra* note 1, at 194. As these authors are careful to explain, increases in the number of workers' compensation claims reported says nothing about the accident rate because of the claims-reporting effects of insurance benefits. *Id.* at 201. A recent overview of the accident literature concluded that the number of workplace injuries has remained relatively stable since 1970, although the level of fatalities has declined. See Emily A. Spieler, *Perpetuating Risk? Workers' Compensation and the Persistence of Occupational Injuries*, 31 *HOUS. L. REV.* 119, 140-44 (1994).

221. See MOORE & VISCUSI, *supra* note 219, at 126 ("The results indicate that workers' compensation, on balance, serves as a fatality reduction mechanism.").

222. See Spieler, *supra* note 220, at 156-57 (reporting that organizational factors accounted for the accident rate difference between employers).

223. Cf. Kraakman, *supra* note 1, at 874 (referring to the "moral hazard" of limited liability).

224. See Lanoie, *supra* note 181, at 80.

ard analysis apply better to employers than workers, the ex ante moral hazard effect will be stronger for employers than workers. From the perspective of an employer, workplace injury is money, not pain, and money does compensate for money. Moreover, because the employer has more control over the design of the working environment, the employer is better positioned to act on that incentive.²²⁵ Thus, a properly nuanced moral hazard analysis would predict that, controlling for claims reporting effects, accident rates would not decline as workers' compensation benefits rise.²²⁶

2. *Measuring Ex Post Moral Hazard.*—As the foregoing discussion illustrated, the predictive capacity of economists' theoretical insights about moral hazard varies according to the degree to which the underlying assumptions are met in the circumstances.²²⁷ Because the assumptions underlying ex post moral hazard²²⁸ seem more plausibly to have been met in the circumstances in which the theory has been applied, it is not surprising that there is substantial empirical evidence that insurance affects postloss behavior. For example, lower health insurance copayments lead to more doctors' office visits and hospital admissions,²²⁹ increases in workers' compensation benefits lead to increased reports of injuries (as opposed to actual injuries) and longer disability periods,²³⁰ and varying physician reimbursement rates for work and nonwork related sickness and injury affects the rate at which sickness and injury are diagnosed as work related.²³¹ Whether the total costs of loss have been increased in all these situations, however, has not been demonstrated.²³² Nor is it clear that

225. I note further that the "rational actor" assumption better fits the situation of a bureaucratic employer than any individual insured. Cf. MAX WEBER, *The Uniqueness of Western Civilization, in MAX WEBER ON CAPITALISM, BUREAUCRACY AND RELIGION* 21, 24, 26 (Stanislav Andreski ed., 1983) (explaining rationality as a defining characteristic of bureaucratic firms).

226. For a recent discussion of why the experience rating of workers' compensation premiums paid by employers may have had less of a deterrent effect on workplace accidents than this analysis might suggest, see Spieler, *supra* note 220. Spieler's conclusion—that organizational, historical, and political factors swamp the incentive effects of insurance—is entirely consistent with my critique of the insurance as incentive analysis. See *id.* at 161 (concluding that "[s]afety and health appear [] to be an integral component of successful corporate culture, not a byproduct of high workers' compensation costs").

227. North makes a similar point about neoclassical economics generally. See NORTH, *supra* note 14, at 20 ("In those instances where something approximating the conditions described above exist, the neoclassical model has been a very effective model for analyzing economic phenomena.").

228. Comparisons between the ex post and ex ante forms of moral hazard appear *supra* notes 186, 193, 198 and accompanying text.

229. See Manning et al., *supra* note 18, at 258-59.

230. See Butler & Worrall, *supra* note 1, at 191.

231. See Butler et al., *supra* note 198, at 5.

232. See Cam Donaldson & Karen Gerard, *Countering Moral Hazard in Public and Private Health Care Systems: A Review of Recent Evidence*, 18 J. SOC. POL'Y 235, 248 (1989) (concluding that "[t]he evidence is that free care at the point of delivery does not necessarily result in higher health care costs

these consequences deserve the opprobrium originally intended, and often still understood, by the term “moral hazard.”

3. *Questioning Moral Hazard.*—At first, the economics of insurance seem to hold out the promise of simple solutions to complex problems. Just plug the legal rule or government program into the moral hazard meter and out comes the policy fix—usually the suggestion that there should be less “insurance” provided in the situation. Yet, instead of providing simple solutions to complex problems, the economics of moral hazard tell us that the problems are even more complex than we thought—insurance is everywhere, the world is a relational web, and a tug in one place changes the tension everywhere else. Even this web metaphor oversimplifies by suggesting that the strength of the “tug” can be measured and the effect on the tension predicted. Because the economics of insurance rest on assumptions that inconsistently and unpredictably fit the world, the strength of the tug cannot be measured and the effect on the tension cannot be predicted.

Given this complexity, any claim that the problem of moral hazard dictates a particular solution to a particular legal or policy problem cannot be demonstrably true. Indeed, any such claim is unknowable in precisely the same sense that the effect of moral hazard control measures were unknowable for nineteenth-century insurers: The data needed to answer the question have not been collected.²³³ Yet, even if we could accurately measure or predict the “increased loss” attributable to insurance, that measurement could not tell us what to do.

Such a measurement could not tell us what to do because there is a final, crucially important limit on the economics of moral hazard. As the economist Richard Zeckhauser pointed out in an early article about long-

through increased moral hazard”); cf. Catherine S. Elliott, *Implication of Uncollectibles for Hospital Coinsurance Rates*, 58 J. RISK & INS. 616, 639 (1991) (arguing from empirical data that the “moral hazard” effect of health insurance is offset by savings attributable to reduction in hospitals’ uncollectible billings). For a discussion of why increased workers’ compensation wage loss benefit claims do not indicate increased loss, see Butler & Worrall, *supra* note 1. Even the ex post moral hazard effect observed in the Butler study on physician diagnoses of work-related sickness and injury may not be deleterious. See Butler et al., *supra* note 198. All that study showed was a change in diagnostic patterns. *Id.* at 2, 5. It does not (and could not) prove that the diagnostic pattern under traditional fee-for-service insurance is correct. It may be that patients with traditional insurance are under-diagnosed as suffering work related injury. If so, the observed change improves the cost internalization aspect of workers’ compensation and appropriately shifts the loss from the health insurance pool to the workers’ compensation insurance pool.

233. In Duncan Kennedy’s words:

[T]he move to efficiency transposes a conflict between groups in civil society from the level of a dispute about justice and truth to a dispute about *facts*—about probably unknowable social science data that no one will ever actually try to collect but which provides ample room for fanciful hypotheses.

Duncan Kennedy, *Distributive and Paternalist Motives in Contract and Tort Law, with Special Reference to Compulsory Terms and Unequal Bargaining Power*, 41 MD. L. REV. 563, 603 (1982).

term medical care,²³⁴ the economics of insurance ignore the benefits that insurance arrangements provide to parties who are not directly involved in the insurance relationship. In the health insurance context which Zeckhauser addressed, these benefits, or “positive externalities,” include disease control, increased productivity attributable to working with healthy coworkers, and, perhaps most importantly, what he described as preserving the “myth” that health care at any price is a right.²³⁵

Equally significant positive externalities exist in other insurance arrangements as well. Consider once again workers’ compensation. Workers’ compensation supports family members and communities who depend on workers’ wages; workers’ compensation also benefits coworkers whose health or safety would be compromised if injured workers stayed on the job. Perhaps more importantly, workers’ compensation sustains the myth that employers take care of their workers, the myth that bodies are not manufacturing inputs, and the myth that people are more important than profit. A similar story could be told about the positive externalities of products liability rules, welfare benefits, social security, unemployment compensation, and the other ways in which society provides for the individual and collective disasters that are a constant feature of the human condition.

For all these forms of insurance, what is left out of the moral hazard equation is at least as important as what goes into that equation. Indeed, what is left out of the moral hazard equation is that which makes possible the “relations of trust” and “internalized moral principles” which Arrow chastized Pauly for forgetting.²³⁶ Unless and until economic theory can bring these public goods into the moral hazard equation, the economics of moral hazard will systematically understate the benefits of social responsibility, overstate the costs, and, in the process, provide unwarranted support for the current legal and political flight from responsibility.

III. Conclusion

It is easy to see why an economist like Kenneth Arrow would embrace the concept of moral hazard. It demonstrates in a rigorous way both the importance of contracting behavior to economic analysis and the complex, relational nature of risk. Indeed, pursuing concepts such as moral hazard helped Arrow and others make the case for moving beyond static approaches to economics.

234. See Richard J. Zeckhauser, *Coverage for Catastrophic Illness*, 21 PUB. POL’Y 149, 159-60 (1973).

235. *Id.* at 164, 159-70 (describing both the positive externalities of health care attributable to reduction of contagion and the effects of putting into action a philosophy of health care as right).

236. See *supra* notes 153-56 and accompanying text.

The concept of moral hazard no doubt had a similar intellectual attraction for the legal economists who first imported it into the legal debate. The economics of insurance generally, and the concept of moral hazard in particular, provided Epstein, Priest, and Shavell, among others, with a theoretical basis for challenging the conventional risk-spreading arguments which led to the expansion of products liability. Using the economics of insurance, this first generation of law and economics scholars conclusively demonstrated that the world is more complex than conveyed in judicial opinions such as *Escola v. Coca-Cola Bottling*.²³⁷ That a new generation of law and economics scholars has begun to use the economics of moral hazard to demonstrate that the world is even more complex than conveyed by the earlier generation is hardly a drop dead criticism of law and economic analysis.²³⁸ The first generation responded to the analytical openings left by those who went before; the new generation has simply continued that tradition.

The more significant criticism focuses on the performative dimension of moral hazard. The concept of moral hazard has been enlisted in support of an effort to reduce the public and private benefits available to the sick, the injured, and the poor. By "proving" that helping people has harmful consequences,²³⁹ the economics of moral hazard legitimate the abandonment of redistributive policies. And, by providing a *scientific* basis for this abandonment, the economics of moral hazard legitimate that abandonment as the result of a search for truth, not an exercise of power.²⁴⁰

237. 150 P.2d 436, 441 (1944) (Traynor, J., concurring) ("The cost of an injury and the loss of time or health may be an overwhelming misfortune to the person injured, and a needless one, for the risk of injury can be insured by the manufacturer and distributed among the public as a cost of doing business."). Epstein discussed *Escola* in *Products Liability As an Insurance Market*, *supra* note 1, at 647, and in RICHARD A. EPSTEIN, *MODERN PRODUCTS LIABILITY LAW* 36-48 (1980).

238. See, e.g., Chandler, *Interaction*, *supra* note 202; Chandler, *Visualizing*, *supra* note 202; Steven P. Croley & Jon D. Hanson, *Rescuing the Revolution: The Revived Case for Enterprise Liability*, 91 MICH. L. REV. 683 (1993); Geistfeld, *supra* note 183; Hanson & Logue, *supra* note 1.

239. One of the most evocative descriptions of the "deleterious consequences" of "directly helpful" social support is made by Arnott and Stiglitz. They write:

The importance of nonmarket insurance is illustrated by what happens if an individual catches pneumonia as a result of going on a hiking trip with inadequate rain gear. His employer gives him compensated sick leave; part or all of his medical expenses are reimbursed by his insurance policy or the state; uncovered medical expenses may be partially deductible from his income tax; and family and friends rally round to provide other forms of support. Such extensive support, while directly helpful, deleteriously affects individuals' care to avoid accidents. In terms of the example, had the individual borne all the costs of catching pneumonia himself, he might have taken the trouble to carry adequate rain gear.

Arnott & Stiglitz, *supra* note 13, at 179.

240. This statement should not be understood to suggest that a search for truth is not an exercise of power, but rather to reflect the social fact that, 100 years after Nietzsche's death, the link between "truth" and "power" remains largely underground.

Yet, as we have seen, the moral hazard argument against social responsibility rests on four systematic mistakes: the mistake of equating insurance and redistribution, the mistake of assuming that money compensates for loss and that the insured is in control, the mistake of ignoring ways that institutions can manage insurance incentives, and the mistake of ignoring positive externalities. As a result, the moral hazard argument against social responsibility systematically undervalues efforts to protect the injured, the sick, and the poor and absolves those who are not sick, injured, or poor of their responsibility for that situation. In this manner, the economics of moral hazard have helped to frame the debate over responsibility for harm in favor of the interests of the economically powerful.

Understanding the economist's moral hazard as encompassing its underlying assumptions, and not just as the logical result of those assumptions, might help reframe this debate. For example, because limited liability is insurance and because insurance increases harm whenever the economist's assumptions are met, the economics of moral hazard suggest that we should assign liability to those actors whose situation is most in line with the assumptions. In other words, the economics of moral hazard—properly understood—suggest that we ought to assign near complete liability to those whose losses are most compensable by money, who are most in control of loss-causing behavior, and who can best be counted upon to respond rationally to incentives.

More importantly, however, recognizing that the economics of insurance have thus far ignored the larger social benefits of insurance could lead us to be more explicit about those benefits and, thus, better able to explain why and how we should share the burdens of life. After all, if there were a broad social consensus about the obligation to protect the sick, the injured, and the poor, and about the form that obligation should take, it would take more than economic analysis to dismantle the welfare state.

Clearly, there is much more work to do. Hence, the “performative” goal of this essay has less to do with moral hazard itself than with the relative lack of attention to insurance problems by scholars outside the economics traditions. As we have seen, insurance ideas and practices define central privileges and responsibilities within a society. In that sense, our insurance arrangements form a material constitution, one that operates through routine, mundane transactions that nevertheless define the contours of individual and social responsibility. For that reason, studying who is eligible to receive what insurance benefits, and who pays for them, is as good a guide to the social compact as any combination of Supreme Court opinions.

This Article has defended this deliberately provocative claim by offering a genealogy of one such idea. While some readers may object that

I have not proved my case—or that the case is too diffuse for proof—it will be more than enough if I have persuaded those who still needed persuading that *liberté, égalité, fraternité*, and more, are at stake when we put moral hazard in play on the insurance field. Liberty: What limits will we place on what insurance institutions can do to control our response to insurance incentives? Equality: Is insurance only, or mostly, for the “moral,” and who are they? Fraternity: Should we allow concerns about moral hazard to limit the solidarity insurance can provide? There is certainly no single or easy answer to any of these questions. But, as asking them demonstrates, the ideas that inform insurance practice—and those practices themselves—deserve our careful attention.