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# The Morals of Moral Hazard: a Contracts Approach

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**Abstract**

Although moral hazard is a well-known economic concept, there is a long-standing controversy over its moral implications. The language economists use to describe moral hazard is often value-laden, and implies moral judgments about the persons or actions of economic agents. This in turn leads some to question whether it is actually a scientific concept, or simply a convenient tool for criticizing certain public policies. At present, there is no consensus about the moral meaning of moral hazard, or about whether the concept can be salvaged by economists. As a first step toward resolving this problem, I suggest a contracts approach to moral hazard. I use the "title-transfer" theory of contract to clarify the moral content of moral hazard, thereby increasing its value to scholars in numerous disciplines. A contracts view is useful for economic policy discussions because it does not include hidden value judgments. At the same time, however, it is also valuable for ethicists because it directly explains a moral dimension of behavior under moral hazard, namely, the violation of property rights.

**Keywords**: moral hazard, incentives, contracts, property rights, resource allocation, risk, uncertainty, entrepreneurship, expropriation

**JEL Codes**: D82, G22, L26

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## Introduction

In the last five decades economists have become increasingly concerned with the incentive problem known as "moral hazard." Yet while economic theory and empirics have studied it at length, its "moral" side remains ambiguous and controversial. What exactly does the "moral" in "moral hazard" mean? And why does an ostensibly positive science describe an economic problem in normative terms? Answers to these questions are important because they influence our understanding of economic theory and policy, which may be biased if basic terminology assumes immoral behavior by the individuals it describes. In fact, critics argue just this: moral hazard has long been a vague and value-laden concept, even though its scientific, value-neutral veneer is repeatedly used in policy debates to justify reductions in insurance and public goods provision (Rowell & Connelly 2012). Accurate or not, this criticism underlines the fact that the moral content of moral hazard matters a great deal for both public policy and human welfare generally. Yet solutions to the questions posed above continue to elude economists.

This paper makes several contributions to the existing literature: first, it surveys the history and present state of the debate; second, it discusses some neglected writing on the morals of moral hazard; third, it provides a partial resolution to the ongoing controversy by presenting it within a framework of contracts. To introduce the underlying problems, Section 1 outlines the history of the term moral hazard and the ways it incorporates value judgments, paying special attention to the overlooked ideas of Frank H. Knight. Section 2 then proposes a view of moral hazard based on the "title-transfer" theory of contracts. This approach removes the hidden value judgments from traditional theory while still allowing for a moral evaluation of incentive problems. Finally, Section 3 applies the contracts framework to contemporary economic terminology. The title-transfer view shows that economic language is often morally ambiguous at best, and implies immoral behavior or bad moral character at worst. The conclusion suggests directions for future research.

## The Moral Heritage of Moral Hazard

### *The Early Insurance Industry*

The term "moral hazard" carries significant moral baggage, and some scholars even argue that "Appearances to the contrary, moral hazard has never been a straightforward, purely logical or scientific concept" (Baker 1996: 239). Its historical development has been "a process of perpetual discovery and reordering, rather than… a linear, forward progression towards greater clarity and rationality" (Leaver 2015: 91). Moral hazard's complex genealogy is vital for explaining why the concept is disputed, and how its ambiguities can be resolved.

Previous work on moral hazard has studied its etymological and sociological history in detail (Baker 1996; Dembe & Boden 2000; Laffont & Martimort 2002: 7-27; Rowell & Connelly 2012; Leaver 2015). The word "hazard" derives from Old French. It initially referred to games of chance, and then to the notion of chance itself. In the 17$^{th}$ century, as a result of its connection to chance and gambling odds, the term was incorporated into early probability theory. Probability was then put to use in the 19$^{th}$ century by the "moral scientists," who began to discover regularities in important characteristics of human life and death. These regularities became the basis for the insurance industry, which coined the term "moral hazard." Early adopters used "moral" in its customary sense, to refer to good and bad, right and wrong, virtuous and vicious, etc. (Baker 1996). However, morality was also used in a subtler way. The word derives from the Latin for *customs* or *mores*. In this usage, moral behaviour is that behaviour which is conventional and proper for the members of society. In fact, this definition was adopted by the moral scientists in their efforts to describe the behaviour of rational people. For them, "moral" simply referred to people's subjective estimations of risk. However, these two meanings of morality were combined by insurers, who implicitly adopted both in their writings (Rowell and Connelly 2012). The word "hazard," because of its connection to gambling, was already associated with improper behavior, and the addition of the word "moral" further indicated a specifically moral danger associated with probability and contained within insurance contracts.[1]

Moral hazard thus became a way to explain how individuals could either influence the probability of losses to insurers or take advantage of unfortunate events. These outcomes represent what have come to be known as *ex ante* and *ex post* moral hazard, respectively (Abbring et al. 2008). *Ex ante* moral hazard refers to a person's effect on the likelihood of an event, while *ex post* moral hazard involves behavior after the event has occurred, for example, using more costly resources than necessary to treat an insured illness. Historically, moral hazard was a way to describe not only situations, but people. The standard *ex ante* example was fire insurance, where individuals might burn (or take less care not to burn) their property in order to collect on a policy. Despite its adoption by economists, moral hazard was conceived as a moralistic term, and often referred to the perfidy of the insured (Dembe & Boden 2000). It reflected a negative moral judgment of consumers, who were deemed likely to engage in "immoral" behavior, e.g. gambling or insurance fraud. The historical precedent of the term is thus strongly normative.

Ultimately, moral hazard became enshrined in insurance practice even though it was loosely or inconsistently defined and carried numerous moral connotations. It implied several possible distinctions and judgments, especially regarding the character of anyone deemed a poor insurance risk (Baker 1996).[2] Moral hazard was thought to spring from two sources: the character of the insured, and the "temptation" posed by the insurance agreement (which is today explained as a problem of incomplete contracts). However, insurance texts rarely mention both simultaneously, and historical evidence indicates the term was never used in a precise or consistent way (Leaver 2015). The combination and confusion of these two sources is one reason for the persistence of the debate on moral hazard. This paper addresses the dispute by developing an approach to moral hazard that removes assumptions about character while also explaining some moral problems of contracting.

*Frank H. Knight*

It is likely some notion of moral hazard has existed since ancient times, and in economics it appears at least as early as Adam Smith (Laffont & Martimort 2002: 8-11; Rowell & Connelly 2012). However, Frank H. Knight—a founder of the Chicago school—was among the first to introduce it to modern economics, through his influential book *Risk, Uncertainty, and Profit* (1921). Despite being a highly original and influential thinker, Knight's work and its moral foundation have been overlooked in the controversies surrounding moral hazard.[3] A discussion of his ideas therefore fills a noteworthy gap in the literature. Moreover, in addition to segueing between the early insurance industry and modern economics, Knight also offers a thought-provoking perspective on moral hazard hinting at both its economic and moral aspects.

Knight's theory of moral hazard is part of his larger project to explain uncertainty and entrepreneurial income. Knight mentions moral hazard in relation to insurance contracts—in keeping with 19th-century writings—but also in connection to the theory of the firm, in keeping with 20th-century economics (Knight [1964] 1921: 249-256). However, for him the significance of moral hazard extends far beyond insurance or even economic behavior; moral hazard is found wherever there is “the assumption by one person of the consequences of another person’s decisions” (Knight, [1964], 1921: 253). He therefore takes a broader view than most economists, who tend to restrict moral hazard to the sphere of (incomplete) contracts.

The key to Knight’s approach—and its continued relevance—lies in understanding *uncertainty* and the ways human beings cope with it. In Knight’s view, all human action is permeated with uncertainty, which is generally unquantifiable and uninsurable. However, whereas economics usually considers uncertainty as a problem of knowledge, Knight perceived it as a dual problem of knowledge and morality; in fact for him, uncertainty is “fundamentally a moral problem” (Emmett 2011: 1151).[4] That is, uncertainty partly reflects human error in the choice of resources and tools (that is, in the choice of means). Yet it carries a deeper moral significance as well: human life is also characterized by moral uncertainty relating to the choice of ends. Specifically, Knight believed all human action involves exploring values:

> the first problem of action is discovering what one truly desires. The chief thing that the common-sense individual actually wants is not satisfactions for the wants which he has, but more, and better wants. The things that he strives to get in the most immediate sense are far more what he thinks he ought to want than what his untutored preferences prompt… Actual human actions are therefore *moral judgments*… Such judgment is difficult… It not only requires rationality, to be sure, but also a degree of self-knowledge plus the virtues of courage, temperance, and prudence to carry out. (Emmett 2011: 1141-1142; emphasis in original)

Action is moral in that it expresses an individual’s judgment of what he ought to want, along with the moral qualities necessary to pursue it. Yet the ends of each human being are uncertain.[5] Social interaction therefore requires individuals to anticipate both their own ends and the ends of others. As a result, "attention and interest shift from the errors in men's opinions of things to the errors in their opinions of men" (Knight [1964] 1921: 292). This shift hints at the enormous complexity of decision making in an uncertain, social context, and thus the need to mitigate the effects of uncertainty wherever possible. In response to this challenge, society develops institutions that provide regularity and structure to human interaction, thus allowing individuals and organizations to transfer the burden of uncertainty to those most willing to bear it. In Knight's view, these institutions include contracting, free markets, and liberal democracy.

More specifically, *uncertainty-bearing* is the special function of entrepreneurs, who make judgments about resource allocation in the face of an unpredictable future (Knight [1964] 1921: 271). Because they control capital and "hazard" it in the marketplace, they are responsible for making wise use of society's scarce resources. In this way, according to Knight, entrepreneurs also take on moral responsibilities as well. In fact, "all human action (which is always action in the midst of uncertainty) is plagued by the problem of moral hazard" (Emmett 2011: 1150). One implication is that moral hazard can appear when individuals shift the burden of uncertainty—that is, the responsibility for good judgment—onto others, especially entrepreneurs.[6]

Knight's distinctly moral view of moral hazard contains elements from both the old insurance trade and neoclassical economics, yet is different from either. It is relevant for at least two reasons: first, if Knight is correct, moral hazard clearly possesses moral characteristics, especially when viewed from a social perspective, where the complexity of human interaction comes to the fore. This places him in stark contrast to later economists who insisted on separating economic and moral behavior. It also provides a foundation for the kind of approach I take in Section 2, where I suggest moral hazard has important moral dimensions. Second, Knight's approach emphasizes the role of entrepreneurs in allocating resources. Framing moral hazard in entrepreneurial terms is far more realistic than assuming mechanical (and morally uninteresting) "principals" and "agents" solving optimization problems, as sometimes happens in the economic theory of the firm (Vranceanu 2014). In fact, economics in general relies on simplifications and abstractions in order to build theoretical models (Queiroz 2015). However, starting with entrepreneurship means approaching moral hazard with more human and realistic notions of action and morality. A more realistic approach also avoids the assumptions of bad character that plagued the early insurance business. This thread is picked up in Section 2, which draws on an updated version of Knight's theory to support my view of contracts.

*Kenneth Arrow, Mark Pauly, and James Mirrlees*

Unfortunately, Knight's contribution to moral hazard theorizing went unnoticed by the increasingly abstract and positivist economics profession. Moral hazard only became a special interest of economists when it was first formally modeled and measured in the 1960s and 70s.[7] The writings of Kenneth Arrow are usually considered the starting point of the modern literature. In particular, his 1963 paper on the market for medical care was highly influential, inspiring a generation's worth of research on insurance and incentive problems. It also launched a debate among several prominent economists about the moral meaning of moral hazard. Arrow did not address moral issues directly, at least, not at first.[8] Instead, he outlined the distinction between *ex ante* and *ex post* moral hazard. Importantly, he focused mainly on the latter, and discussed methods for better incentivizing physicians not to unnecessarily increase the cost of care.

Despite Arrow's emphasis, Mark Pauly (1968) took him to mean that morally bad decisions or persons are responsible when individuals consume more medical services or take less care to be healthy when insured. For Pauly, this is a problem of mistaken moralizing:

> Insurance writers have tended very strongly to look upon this phenomenon (of demanding more at a zero price than at a positive one) as a moral or ethical problem, using emotive words such as "malingering" and "hypochondria," lumping it together with outright fraud in the collection of benefits, and providing value-tinged definitions as "moral hazard reflects the hazard that arises from the failure of individuals who are or have been affected by insurance to uphold the accepted moral qualities"… or "moral hazard is every deviation from correct human behavior that may pose a problem for an insurer"... It is surprising that very little economic analysis seems to have been applied here. (Pauly 1968: 535; citations removed)

This interpretation is consistent with Baker's research on early insurance, where immoral behavior was a primary concern. In Pauly's view, the normative and moralistic language of insurance is especially erroneous when it is imported into economic reasoning. His general argument is that decisions under moral hazard are not morally problematic. He suggests that "the problem of "moral hazard" in insurance has, in fact, little to do with morality, but can be analyzed with orthodox economic tools" (Pauly 1968: 535).[9] That is, people consume more services when insured because the benefits of increased use are concentrated on the individual, whereas the costs are dispersed among a large group. Price is effectively reduced, so quantity demanded increases, just as the law of demand states. According to Pauly, it is mistaken to conclude, as Arrow does, that moral hazard is an aberration or a "defect in… [the principal's] control" (Pauly 1968: 535n3). Increased use is simply an inevitable response to changing incentives (such as subsidized medical care), and no different from other economic behavior:

> the response of seeking more medical care with insurance than in its absence is a result not of moral perfidy, but of rational economic behavior. Since the cost of the individual's excess usage is spread over all other purchasers of that insurance, the individual is not prompted to restrain his usage of care. (Pauly 1968: 535)

There is then nothing especially immoral about behavior under moral hazard. Importantly, Pauly also treats moral and rational choices as substitutes rather than complements, implying that economic problems cannot or should not be analyzed from a moral perspective. Arrow observed as much in his response:

> We may agree certainly 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. It does not follow that no constraints ought to be imposed or indeed that in certain contexts individuals should not impose constraints on themselves. 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. (Arrow 1968: 538)

Arrow's quip cuts to the heart of the problem: moral and economic decisions do not exist independent of each other, and economic behavior does not exist in a moral vacuum.[10] For him, decisions made under conditions of moral hazard can be morally bad *and* "rational." For instance, in Pauly's terms, consumers could be "rational malingerers" or "rational hypochondriacs." According to his reasoning, immoral behavior might even be the rule for rational behavior under moral hazard, if, for example, people consistently act in ways that are individually rational but not "socially optimal."[11] Furthermore, morally good behavior can be a serious limitation on incentive problems: Arrow suggests that moral rules and trusting relations are the non-market tools by which societies overcome market failure caused by moral hazard (Arrow 1968; 1970). The institutional environment thus plays a large role in restraining potentially immoral (but rational) behavior. Ultimately, Arrow (1970) acknowledged that the word "moral" is not always appropriate in economic theory. Nevertheless, arguments like Pauly's fail to justify either the claim that there is no moral dimension to behavior under moral hazard, or the implication that moral analysis picks up only where economics leaves off. Most importantly, this early debate neglected the moral implications of contracts, focusing instead on "taking less care" and "excessive consumption." As I show, however, these views neglect important moral obligations enshrined in agreements between consumers and producers.

A postscript to this discussion is added by Nobel Laureate Sir James Mirrlees. He holds that both Arrow and Pauly err in characterizing moral hazard, which for Mirrlees is an economic concept. In his view, moral hazard is neither the result of immoral behavior nor a necessary inefficiency to be rooted out. Discussing the Arrow-Pauly dispute, he notes that,

> They agreed that insured persons who fully exploit their contracts, expressed in terms of observable behaviour, thereby reduce the efficiency of the economy. Pauly adopted the startling position that such "rational economic behavior" cannot be morally perfidious; Arrow, more reasonably, emphasized its disadvantages. But both were wrong: there is a wide class of cases in which there is no significant loss of efficiency as a result of self-interested unobservable behaviour. (Mirrlees 1999 [1975]: 3)

This implies behavior under moral hazard can be immoral: hence, the qualified defense of Arrow. Yet Mirrlees also claims such behaviors need not be inefficient, which cuts against Arrow's position. Mirrlees observes, paraphrasing from another author, that "it is odd that the problem of self-interested unobservable behaviour has come to be called "moral hazard"" (Mirrlees 1999 [1975]: 4). He thus appears to believe economic reasoning is sufficient to explain the influence of incentives. He hints that when behavior does not produce major inefficiencies, there are no moral problems to worry about, because there is not a sufficient conflict of interest between principal and agent. The moral element only comes into play when behavior results in significant undesirable outcomes. This is important for the next section, because it paves the way for an approach based on contractual agreements and the conflicts that arise when they are broken. It also supports the claim made in the final section that economic language is often abstract, and does not always provide enough information to show whether moral conflicts between principal and agent actually exist. In general though, Arrow, Pauly, and Mirrlees do show that economists' descriptions of human choice—e.g. "self-interested unobservable behavior" versus "moral hazard"—play a large role in how we conceive of those choices to begin with, and thus how we frame economic discussions. This should be kept in mind throughout the rest of this paper, which surveys several other terms that suffer from moral framing problems.

## A Contracts Approach to Moral Hazard

This section offers a conceptual framework for the ongoing debate over the morals of moral hazard. To begin, I trace the logical implications of moral hazard as an entrepreneurial problem, as first recognized by Knight. Incorporating entrepreneurship into moral hazard requires discussing ownership and property rights. Together, these form the basis of a moral hazard theory that recognizes both its economic aspects (through entrepreneurship) and its moral implications (through contracts). This discussion is necessary to show that a contracts approach is not an arbitrary framework, but results naturally from considering the role entrepreneurs play in resolving incentive problems like moral hazard. The final section of the paper then uses the new approach to discuss contemporary economic terminology.

### *Entrepreneurship, Judgment, and Contracts*

This subsection builds on some broad themes from Knight's neglected work in order to highlight the role of entrepreneurs in moral hazard. Entrepreneurship is a response to uncertainty, which is generally characterized as heterogeneous, unpredictable, incalculable, and uninsurable. Since at least the 18th century economists have argued that uncertainty represents a persistent, fundamental problem for society, one that entrepreneurs solve to the best of their abilities (Cantillon [1755] 2001; Knight [1964] 1921; Mises [1949] 1998; Hébert and Link 1988). The idea that uncertainty is uninsurable and must be dealt with using a special skill was also hinted at by the 19th-century insurance writer A.F. Dean, who concluded that, "moral hazard cannot be captured by a classification list and can only by  [*sic*] addressed by "the skill of the company management"" (Baker 1996: 256n76). To overcome uncertainty, entrepreneurs use *judgment* to decide between competing uses of scarce resources, i.e. property (Fetter 1915; Knight [1964] 1921; Penrose [1959] 2009: 37-38; Foss & Klein 2012; McCaffrey 2015). Uncertainty thus leads naturally to entrepreneurship, ownership, property rights, and contracting, key concepts for understanding moral hazard. In particular, as I explain, contracts provide the common ground between the economic and moral aspects of moral hazard.

Contracts between principal and agent—including entrepreneurs and hired labor—remain the focus of moral hazard research, which is usually defined in terms of asymmetric information and incomplete contracts (Kotowitz 2008). Yet entrepreneurship research also has something to say about contracting and its relation to moral hazard. To see this more clearly, consider the role contracts play in entrepreneurs' decisions. Following Knight (1921 [1964]), and especially Berle and Means (1932), economists have been interested in conflicting incentives within organizations, especially the separation of ownership and control. Moral hazard is one such problem (Hülsmann 2006). It is also specifically entrepreneurial. Entrepreneurs are centers of control in the firm, and one of their most important tasks is to properly structure incentives for their organizations (Foss and Klein 2012). Writing and revising contracts is a vital way to accomplish this. Clearer and more complete contracts help mitigate incentive problems, because they make the principal's expectations about agent behavior more obvious, reducing grey areas.

However, it is impossible to anticipate every problem or incentive, and there are elements of uncertainty and speculation in contract adjustment. For example, in insurance, "one must be extra vigilant when making decisions as an insurer, not to insure for the wrong price or probability" (Hale 2009: 20). The clearest, most effective type of contract is generally uncertain, as is the behavior of agents. Trial and error are therefore required, which makes adjustment costly for entrepreneurs, who estimate the effects of incentives in advance, and change "rewards" and "punishments" as they update their information. They can, for example, anticipate lower worker productivity due to imperfect monitoring and rewrite labor contracts accordingly (Hülsmann 2006). In general, they must use good judgment in defining their agents' obligations (Foss & Klein 2012: 199), while carefully appraising the cost of the marginal contract clarification. This trial-and-error process reduces undesirable incentives, and produces constant interplay between the entrepreneur's anticipations, the agent's behavior, and the contract itself.

### *The Title-Transfer Theory of Contract*

Another step is necessary to outline this new approach to moral hazard: firmly connecting ideas about entrepreneurship and contracts to moral behavior. Given that economists discuss moral hazard mostly in relation to contracts, it makes sense to think in terms of a moral theory that takes special note of contractual relations (Claassen 2015). One way to do this is by incorporating a theory of property rights into the economic framework discussed in the previous sub-section.[12] Understanding moral hazard in light of property provides a valuable perspective on its moral implications. With this in mind, I now introduce the "title-transfer theory of contract" developed by Evers (1977) and Rothbard (1974; 1998), and expanded by Kinsella (2003). The title-transfer theory sheds light on moral hazard by explaining the property rights of principal and agent, and thus some of their moral obligations to each other (i.e. the obligation not violate those rights).[13]

Property and contract are often considered separate fields of law, but in the title-transfer approach, contract theory is a subset of property theory. Contracts are agreements about property rights, specifically, agreements about *voluntary transfers of property titles*. To be enforceable, a contract must involve some transfer of this kind. The title-transfer theory runs counter to some utilitarian or pragmatic theories, which take *promises* or *expectations* of transfers to be the basis of enforceable contracts (Fried 1981; Barnett 1993). However, transferring property titles does not require a promise to do so or an expectation of receiving a property title (Kinsella, 2003).

Even though promises and expectations are often used in law to establish whether a contract is biding, in the title-transfer view, they are incidental:

> a binding contract should be considered as one or more transfers of title to (alienable) property, usually title transfers exchanged for each other. A contract should have nothing to do with promises, which at most serve as *evidence* of a transfer of title. A contract is nothing more than a way to give something you own to another person… In general, title is transferred by manifesting one's intent to transfer ownership or title to another. A promise can be one way of doing this, but it is not necessary… Ultimately, contracts are enforced simply by recognizing that the transferee, instead of the previous owner, is the current owner of the property. If the previous owner refuses to turn over the property transferred, he is committing an act of aggression (trespass, use of the property of another without permission) against which force may legitimately be used. (Kinsella 2003: 21-22; emphasis in original)[14]

Consider an example. Jane owns a house that she agrees to give to Robert in exchange for payment of $100,000. Jane and Robert thereby form an enforceable contract consisting in their exchange of titles to their respective property. However, suppose Jane accepts the money even though she knows she cannot deliver the house as stipulated (perhaps it does not actually exist). By acquiring title to Robert's money without transferring title to the house, Jane violates the terms of contract. She acquires Robert's property without his permission, and is guilty of fraud.[15] This is also theft, as it involves transferring resources to a new owner without the original owner's consent (Rothbard 1998: 77-84).[16] Importantly, this breach of contract depends on the failure to transfer a property title, not on broken promises or unmet expectations as such.

*If* something like fraud or theft is a feature of behavior under moral hazard, immoral action is implied. Whether this is actually the case though, has yet to be determined. While some examples of moral hazard involve straightforward conflicts, there are not always obvious links between the economic and moral factors involved. Yet by using contractual obligations as a starting point, we can analyze some of these more difficult cases. In particular, we can study moral grey areas where contracts do exist, but imperfectly specify the agent's behavior. In such cases, there is no exact description of the agent's moral obligations or their boundaries.

## Applying the Contracts Approach

### *Moral Dimensions*

The contracts approach allows us to consider behavior in moral terms without resorting to hidden value judgments about character or motivation. We can now apply it to some ongoing controversies. Generally, current literature identifies two ways to unpack the moral side of moral hazard: through its history and through its philosophical assumptions. Each path is open to multiple interpretations. The historical disputes have already been discussed in Section 1. In particular, Rowell and Connelly (2012) argue, following Pauly (1968), that moral hazard has been stripped of moral content since being incorporated into economics. However, Leaver (2015) provides convincing evidence that economists continue to use the term in inconsistent, moralistic ways, especially in policy debates. These and other sources show that the historical record on moral hazard remains murky. What is needed then is a more fundamental analysis of the moral implications of moral hazard, rather than simply a discussion of how social science has used and misused the term in the past.

This brings us to the basic philosophical problems of moral hazard, which are studied systematically by Hale (2009) and Braynen (2014). Hale argues that moral hazard is morally neutral. His approach is novel in that it begins by searching for any inherently moral actions associated with "bad" incentives. For him, the vital question is "whether there is anything inherently morally wrong with increasing one's exposure to risk in the face of insurance" (Hale 2009). Specifically, Hale lists three behaviors that could link immoral action to moral hazard: lying, cheating, and stealing. His conclusion is that none of these is *inherently* a feature of moral hazard. When people do lie, cheat, and steal in response to insurance incentives, it is these behaviors that are immoral, not moral hazard as such.

Hale's arguments are generally convincing, yet they only apply to these three behavior types, and even then, only to Hale's particular definitions of them. These limitations lead Braynen (2014) to conclude that Hale fails to establish that moral hazard is morally neutral. According to Braynen, moral hazard does have an inherent moral *dimension*, although it is an open question whether it possesses a fixed moral *value* of "good" or "bad." My own approach is similar: Hale's assumptions lead him to overlook at least one set of conditions in which moral hazard is inherently immoral: stealing through contract violation. Importantly, stealing and contracts are both featured in Hale's argument, but only as separate problems. In the title-transfer theory though, they are combined. However, Hale embraces the broad notion of contract-as-promise mentioned above. In his view, insurance contracts are promises about future risk-taking. For instance, "the agent promises to continue acting in the same way, so long as the principal promises to cover the agent should calamity befall her" (Hale 2009: 11). As a result, Hale only considers contractual obligations in light of *cheating*, that is, of failing to act as promised.

Stealing is considered separately, as a type of greed: the idea is that people might steal by exposing others in the insurance pool to excessive risk.

Hale points out that this is not inherently immoral, because one major reason insurance contracts exist in the first place is to enable people to increase their risk exposure. This may be true, but it does not mean there is no way to conceive of moral hazard as a kind of stealing. For instance, the title-transfer theory reaches beyond the moral implications of contract-as-promise by showing that stealing can be connected with moral hazard through property rights. Title-transfer does not consider moral hazard in terms of *changing exposure to risk,* but in terms of the *changing pattern of property ownership*. Ownership and property transfer are umbrella concepts capturing numerous types and contexts of moral hazard. They apply in a variety of contractual settings, including risk and insurance, whereas Hale's promises approach only applies somewhat narrowly to the latter. Title-transfer broadens the scope of discussion to include cases of moral hazard that do not involve promises or increased risk exposure, such as *ex post* moral hazard resulting from expropriation (see the following sections). Without ownership and property transfer, morally relevant factors are excluded from the analysis. Bringing this point to light is a major purpose of this paper. To expand on it, I now discuss some contemporary economic terminology.

### *Contemporary Moral Hazard Terminology*

The current language of moral hazard has grown out of the models and disputes of the 60s and 70s, but has also taken on a life of its own. Yet some critics maintain economic language includes a "pejorative undertone" that hints at "greed, selfishness, and personal gain at the expense of others" (Stone 1999-2000: 14). It is therefore worth considering more recent writings in addition to the classic disputes mentioned in Section 1. In setting up this discussion, two developments in economic theory should be mentioned. The first is that since the 1970s moral hazard has been viewed as a problem of asymmetric information (Mack et al. 1970; Arrow 1970). Second, and related, the scope for moral hazard theory and policy work is much broader in current research than in earlier writings, which focused mostly on insurance markets. These two developments have produced more general theories of moral hazard, but also more specialized terminology. Writers like Arrow and Pauly acknowledged early on that moral hazard extended far beyond insurance, and today, almost any principal-agent relationship—especially from a contractual point of view—is open to analysis using concepts like moral hazard.

### *"Hidden Action"*

Moral hazard is frequently described as a kind of "hidden action" (Arrow 1985; Laffont & Martimort 2002: 12). Hidden action occurs when the principal possesses imperfect information about the agent's behavior because that behavior cannot be perfectly monitored. It therefore becomes possible for the agent to engage in action not desired by the principal, such as lowering the quantity or quality of labor. A conventional example is the entrepreneur who can only imperfectly observe the productive contribution of an employee (Kotowitz 2008). By itself, the term "hidden action" does not imply moral content. It therefore looks promising for those who insist that economic language can be purged of moral implications. At the same time though, it is also vague and open to different interpretations, including moral ones. To get at the moral implications of hidden action, we must ask *why* it is hidden. Agents can conceal their behavior for many reasons, and exploiting a principal for private gain is only one of them.

This is one place the title-transfer approach comes in handy: we *can* say something about the morality of hidden action in relation to contracts. Hidden action is immoral when the reason for secrecy is a breach of contract, and therefore, of property rights. One example is the employee who conceals that he has chosen not to perform contractually agreed labor while still accepting the full wage for that labor. This violates the labor contract, and is immoral insofar as it represents a violation of the employer's property rights through theft.[17] Other things equal, if the agent chooses to produce less than the amount for which he is remunerated, immoral behavior has occurred. It is vital to point out, however, that this is only one possible outcome of incentives under moral hazard. Terms like "hidden action" do not tell us what agents really value, and thus whether they will act contrary to their contractual obligations.

Further, it is significant that action is usually hidden because of imperfect monitoring, not necessarily because agents choose to hide it. In fact, some economists argue that moral hazard persists even when an agent attempts to keep the principal informed: "The agent may, of course, offer to supply information about the unobserved actions or states—but such information cannot be credible" (Kotowitz 2008). In other words, information lacks credibility because the agent cannot be trusted to reveal her true actions, which conflict with the principal's goals (and with the contract). Unfortunately, this appears to return to the old assumption of bad character. If so, an unjustified moral judgment has been smuggled in. If we assume action under moral hazard is hidden (and information is not credible) because the agent is acting contrary to the wishes of the principal, we assume what needs to be proved. Hidden action reinforces the idea that words like "principal" and "agent" can conceal moral assumptions, even though they appear to be purely technical terms. However, the contracts framework brings these moral dimensions into the open, while still leaving room for economic logic to describe the values and choices of the agent: it does not assume anything about character.

*"Shirking"*

Shirking is probably the most morally loaded term used to describe behavior under moral hazard. It is a more explicit version of hidden action because it specifies *why* action is hidden—the agent is trying to avoid her contractual duties. "Shirking" denotes the willful escape from responsibility, and therefore assumes something about the agent's motivations. By using the word, economists invoke a negative moral judgment of a worker's behavior, and possibly her values and character as well. Shirking therefore suggests the historical uses of "moral hazard" criticized by Baker (1996), as well as the contemporary focus on "fraud and malingering" identified by Dembe and Boden (2000). Of course, it is possible that in real-world cases of moral hazard, genuine shirking does take place. If so, it can be analyzed using the contracts approach described above.

Because it assumes the deliberate avoidance of contractual duties, shirking is more obviously immoral than some other types of hidden action. Generally, it should be uncontroversial that—other things equal—accepting payment under false pretenses is fraud. As with other terms though, there are grey areas. We can best make this point by drawing a distinction between "active shirking" and "passive shirking."[18] Active shirking involves explicitly choosing to avoid one's duties while simultaneously accepting compensation. It is therefore the more objectionable type. Passive shirking, on the other hand, does not involve a conscious decision to avoid the terms of contract, or to receive compensation without labor. This is especially relevant in cases of incomplete contracts: after all, the existence of uncertainty means essentially all contracts are incomplete.

Consider some examples. Passive shirking might occur when a worker (a) simply does not realize that certain quantities or qualities of labor represent a breach of contract, or (b) considers such breaches negligible, or (c) does not take the time to consider the moral implications at all. Passive shirking is therefore akin to "taking less care"—it means something like, "taking less care to consider one's contractual obligations." It also might reflect a lack of "moral attentiveness," the persistent attention to the moral implications in everyday experience (Culiberg and Mihelič 2016). Passive shirking can thus take many forms. For instance, changes to marginal productivity can be caused by talking with co-workers, checking personal emails or social media accounts, daydreaming, and other types of lost output that can run counter to the principal's expectations without actively flaunting them. These behaviors certainly affect productivity, and often violate work agreements, but if they are not well defined in a contract, they might not be as morally problematic as active shirking. In any case, there is an entrepreneurial element in the action of both employers and employees. All parties constantly try to better define and enforce their obligations. As Knight suggested, such trial-and-error has a profound impact on how societies allocate scarce resources, and therefore also requires a kind of social responsibility.

A final question is whether shirking is justifiable as an economic term. I do not believe it is, especially when used as a general description of behavior under moral hazard. Moral hazard does have moral dimensions, but it is vital that they are clearly explained rather than assumed. Using the word "shirk" easily allows for disguising moral judgments as positive claims about human behavior; in fact, according to the literature, this is exactly what happened historically with "moral hazard."

### *"Taking Less Care"*

Insurance literature often describes moral hazard as an incentive to "take less care" (Hale, 2009). An obvious question though is, "taking less care than *what*?" The answer: "taking less care than without insurance." Care in this sense is a counterfactual concept. It is also morally ambiguous, because the implications depend on how we define the moral amount of risk-taking. This question is the subject of Hale's (2009) paper, which argues that increasing risk exposure due to moral hazard is not inherently immoral. I am generally in agreement with this conclusion. Nevertheless, there is still scope for immoral behavior directly related to taking less care, or assuming more risk.

The key point is that undesirable events (fire, illness, death) are not completely random, but also depend on the behavior of the insured. For instance, when an individual is insured against fire, she can choose between varying degrees of taking care, e.g. by choosing to install smoke alarms or sprinklers, or choosing not to accumulate accelerants, neglect faulty wiring, etc. Taking care thus involves a constant stream of decisions about how to behave and how to use resources to influence the likelihood of events. Importantly, deciding on levels of care, even low levels, is different from actually committing arson so as to collect an insurance payment. Such behavior is clearly fraudulent and immoral, as it violates the insurer's property rights.[19]

Deciding on the appropriate degree of care is more difficult. A first and vital point is that taking less care *as such* cannot be morally bad, because *some level of care must always be neglected*. Individuals face tradeoffs between different amounts of care, and it is an extreme moral imposition to require the maximum amount of care be taken. In the case of fire, maximum care would make other important activities impossible. For instance, removing every flammable object from one's house would drastically lower one's standard of living while also absorbing a large amount of time and effort that therefore could not be spent on more beneficial activities. Moreover, tradeoffs occur not only between taking care and other activities, but between different types of care, e.g. between fire and flood prevention.

Clearly then there must be some amount of care not taken, and the economic necessities of life require individuals to find a balance between various types and degrees of risk and uncertainty, and to weigh these carefully—e.g. through insurance contracts—when considering taking on obligations to others. Furthermore, the "correct" balance between risks varies between individuals and for the same individual over time: the circumstances of time and place change constantly, meaning the likelihood of events and the effectiveness of care also change. In this sense, it is difficult to characterize "taking less care" as immoral per se. In fact, given that individuals are always taking less care to one extent or another, there is little room for moral considerations on this basis alone. Once again, insurers and insured each act entrepreneurially in deciding what level of care to take in order to reach a mutually-beneficial level of protection.

Taking less care has greater moral significance when it involves negligence, especially when negligent behavior increases the level of risk beyond the limits established by contract. For example, suppose Jane insures her house against fire. As part of the contract, she is required to take "reasonable" precautions. However, even though the opportunity cost of prevention is low, Jane grows careless over time, and allows a pool of gasoline to form in her garage, where she also keeps a refrigerator she knows to have faulty wiring. Eventually, a fire breaks out and destroys the home. Jane appears to have acted unwisely and negligently; however, she has not yet behaved immorally *in the sense of violating property rights*. Immoral behavior occurs only if she fails to reveal her negligent behavior to the insurer. If she discloses this information, she is simply unable to cash in her insurance policy. However, if she does not reveal her negligence, and submits the claim anyway, she commits fraud. As before, this case can be described as a violation of the insurer's property rights. Jane transfers ownership of the insurer's property (the payout) to herself without fulfilling the terms of the contract, and thus commits theft.

*"Expropriation"*

Moral hazard has also been conceptualized as a form of "expropriation." This view originated in political economy, and for that reason, hints at both economic and moral problems. Like "shirking," "expropriation" can carry moral implications, as it often connotes exploitation or injustice. Unlike shirking, however, expropriation *denotes* only the transfer of ownership. For that reason, Hülsmann (2006: 35n3) suggests it should be used in a technical sense, as shorthand for, "using [an individual's] property against his will with impunity." Hülsmann defines moral hazard as,

> the incentive of a person A to use more resources than he otherwise would have used, because he knows, or believes to know, that someone else B will provide some or all of these resources. The important point is that this occurs *against B's will* and that B is unable to sanction this expropriation immediately. (Hülsmann 2006: 35; emphasis in original)

The concept of expropriation has one major advantage: it emphasizes moral hazard is fundamentally about *how individuals own and allocate resources*, and can therefore be understood as a property rights problem. Expropriation is also an example of *ex post* moral hazard. Yet unlike other *ex post* examples, such as supplier-induced demand, it does not require information asymmetries. Instead, the key point is the conflict between A and B over ownership and resource use. Further, A's decision to "use more resources" may imply other behaviors described by economists— hidden action, shirking, negligence, and so on—but it need not. Motivations like greed (Hale 2009; Stone 1999-2000) or bad moral character (Baker 1996; Dembe & Boden, 2000) might also play a role, but are not required to reach moral conclusions.[20] All that is necessary is the conscious use of B's resources by A for his own ends, along with A's belief that B cannot or will not approve that use. Regardless then of whether additional moral factors like greed or deception are involved, A makes the decision to expropriate B. Effectively, A flaunts B's wishes to allocate his resources differently. In the context of breaching a contract, depriving an owner of justly-owned property is a type of aggression and theft in that the owner is denied the lawful use of resources.[21] Viewed in light of the title-transfer theory, the expropriation view implies moral judgment, although without making assumptions about the character of the agent. Interestingly, "expropriation" has been suggested as an alternative to "moral hazard," the latter being a "technocratic" term adopted by economists "ever weary of moralising" (Hülsmann 2006: 35).[22] Nevertheless, given its moral connotations, expropriation is difficult to use as a scientific term: although it might be economically useful, it is morally ambiguous. Ideally, a term should keep the first quality and discard the second. I return to this point below.

## Conclusion

Although insurers, economists, and policymakers have debated moral hazard for decades, little progress has been made toward resolving tensions between the many constantly shifting definitions of the term. The core concept remains "fuzzy" rather than "precise" (Leaver 2015). However, considering moral hazard problems through a framework of entrepreneurship and contracts allows us to gain some insight into the moral implications of moral hazard. Specifically, economic terminology sometimes implies action with definite moral content. Terms like “shirking” invoke moral judgments, while phrases such as “hidden action” and “spending after marginal benefit falls below marginal cost,” do not. Other terms, like “taking less care” and “expropriation,” are ambiguous.

In any case, the moral character of behavior is not determined by whether an agent’s decision is “rational” from the point of view of economic theory: as Arrow realized, the rationality of an action does not excuse it morally. Furthermore,

> analysis suggests that [the scope for immoral behavior] goes much further than the conventional understanding of moral hazard, which does not depart clearly from the mainstream view of rational self-interested behaviour. Moral behaviour arises from successful social relations, structured (and thus both enabled and constrained) by a sound institutional environment. (Dow 2012: 30)

For this paper, the more pressing point is not rationality, but whether a contract has been violated. Property rights and contracts are embedded in the institutional environment described by Dow and Knight, and thus play a vital role in delimiting moral action, as Arrow also suggested. They thus provide an important framework for thinking about moral behavior. Nevertheless, there are moral grey areas where the language describing an agent’s decisions is difficult to interpret from a moral perspective, or where the principal’s expectations are unclear. In these cases, more information is needed about particular circumstances in order to form a moral judgment. These kinds of limitations mean that, generally speaking, economic language is an insufficient guide for making wide-ranging judgments about the morality of incentive problems.

Although the contracts approach can be used to study a wide range of behaviors, it is by no means a complete account of the morals of moral hazard. Rather, it is one step toward unraveling this long-standing problem. One limitation is that it works best within the context of well-defined obligations. Yet cases of moral hazard under incomplete or poorly-defined contracts are also highly significant. Claassen (2015), for example, argues moral hazard can be conceptualized as a kind of social contract. Furthermore, in some cases, contracts are simply too costly to write, leaving economic actors with the kind of poorly-defined obligations that allow for moral hazard in the first place. An important step for future research then is to expand the contracts approach to account for these broader types of agreements. A large part of this agenda involves exploring the limits of entrepreneurs' abilities to lower the cost of contracting and adequately define more complex obligations. A second, more general limitation is that there is clearly more to morality than contractual obligations. Therefore one vital way for moral hazard research to advance is by studying how other moral theories relate to it, and how they overlap or conflict with the contracts approach. In addition, much remains to be said about the distinctly entrepreneurial aspects of moral hazard. Entrepreneurship, especially through the work of Frank Knight, has played a fascinating though neglected part in moral hazard theory, and actually predates the seminal contributions of Arrow, Pauly, and Mirrlees. Knight also believed the moral dimensions of moral hazard are closely related to its entrepreneurial aspects. Following his lead, future research can explore moral hazard within the broader framework of entrepreneurial ethics (e.g. Hannafey 2003).

A final topic for future work involves the continued use of the term moral hazard in economics. It is clear there is a long history of dispute surrounding its moral uses and implications. This history seems inextricably tied to basic terminology, which continues to inspire argument. Given the diverse range of behavior that falls under the heading of moral hazard, and the confusion and controversy these words cause, it is worth asking if researchers would be better off dropping the word "moral" altogether and replacing it with something less ambiguous. A new term could, for instance, highlight the specifically economic aspects of moral hazard, and leave it to other disciplines to determine the moral implications of particular cases. Dembe and Boden (2000) suggest as much, although they do not recommend a specific replacement. Weinman (2010: 7) proposes, "rational indifference to level of consumption at zero marginal cost" as an alternative; however, this is overly-technical and lacking the efficiency and appeal of "moral hazard." Instead, I suggest "resource hazard." The advantages of a "resource-based view" are that it (a) focuses on property ownership and resource allocation, thus clarifying the central economic issues at stake, and (b) does not carry normative implications. In addition to avoiding moralistic terms, "resource hazard" has the benefit of underscoring the special pattern of resource allocation and use occurring under moral hazard. This pattern is part of a broader family of incentive problems including adverse selection and the tragedy of the commons.

**References**

Abbring, J.H., Chiappori P.-A., and Zavadil, T. 2008. 'Better Safe Than Sorry? Ex Ante and Ex Post Moral Hazard in Dynamic Insurance Data.' *CentER Discussion Paper No. 2008-77*.

Arrow, K.J. 1985. 'The Economics of Agency.' In J. Pratt and R. Zeckhauser (eds.), *Principals and Agents: The Structure of Business* : 37-54. Boston: Harvard Business School Press.

———. 1970. ‘Political and Economic Evaluation of Social Effects and Externalities.’ In J. Margolis (ed.), *The Analysis of Public Output*: 1-30. New York: Columbia University Press.

———. 1968. ‘The Economics of Moral Hazard: Further Comment.’ *American Economic Review*, 58:3, 537-539.

———. 1963. ‘Uncertainty and the Welfare Economics of Medical Care.’ *American Economic Review*, 53:5, 941-973.

———. 1962. ‘Economic Welfare and the Allocation of Resources for Invention.’ In *The Rate and Direction of Inventive Activity: Economic and Social Factors*: 609-626. Princeton, NJ: Princeton University Press.

Baker, T. 1996. ‘On the Genealogy of Moral Hazard.’ *Texas Law Review*, 75:2, 237-292.

Barnett, R.E. 1992. ‘Some Problems with Contract as Promise.’ *Cornell Law Review*, 77, 1022-1033.

Berle, A., and Means, G. 1932. *The Modern Corporation and Private Property*. Chicago: Commerce Clearing House.

Braynen, W. 2014. ‘Moral Dimensions of Moral Hazards.’ *Utilitas*, 26:1, 34-50.

Cantillon, R. 2001 [1755]. *Essay on the Nature of Commerce in General*. (H. Higgs, trans.). New Brunswick, NJ: Transaction.

Claassen, R. 2015. ‘Financial Crisis and the Ethics of Moral Hazard.’ *Social Theory and Practice*, 41:3, 527-551.

Culiberg, B., and Mihelič, K.K. 2016. 'Three Ethical Frames of Reference: Insights into Millennials' Ethical Judgements and Intentions in the Workplace.' *Business Ethics: A European Review*, 25:1, 94-111.

Dembe, A.E., and Boden, L.I. 2000. 'Moral Hazard: a Question of Morality?' *New Solutions*, 10:3, 257-279.

Dow, S.C. 2012. 'Economics and Moral Sentiments: the Case of Moral Hazard.' In J.C. Caldas and V. Neves (eds.), *Facts, Values and Objectivity in Economics*: 17-32. London: Routledge.

Durbin, D. 1997. 'Workplace Injuries and the Role of Insurance: Claims Costs, Outcomes, and Incentives.' *Clinical Orthopaedics and Related Research*, 336, 18-32.

Emmett, R.B. 2011. 'Frank H. Knight on the 'Entrepreneur Function' in Modern Enterprise.' *Seattle University Law Review*, 34:4, 1139-1154.

Evers, W.M. 1977. 'Toward a Reformulation of the Law of Contracts.' *Journal of Libertarian Studies*, 1:1, 3-13.

Fetter, F.A. 1915. *Economic Principles*. New York: The Century Co.

Fried, C. 1981. *Contract as Promise: A Theory of Contractual Obligation*. Cambridge, MA: Harvard University Press.

Foss, N.J., and Klein, P.G. 2012. *Organizing Entrepreneurial Judgment: A New Approach to the Firm*. Cambridge: Cambridge University Press.

Hale, B. 2009. 'What's so Moral about the Moral Hazard?' *Public Affairs Quarterly*, 23:1, 1-25.

Hannafey, F.T. 2003. 'Entrepreneurship and Ethics: A Literature Review.' *Journal of Business*

*Ethics*, 46:2, 99-110.

Hébert, R., and Link, A. 1988. *The Entrepreneur: Mainstream Views and Radical Critiques*. 2nd ed. New York: Praeger.

Hülsmann, J.G. 2006. 'The Political Economy of Moral Hazard.' *Politická ekonomie*, 1, 35-47.

Kinsella, N.S. 2003. 'A Libertarian Theory of Contract: Title Transfer, Binding Promises, and Inalienability.' *Journal of Libertarian Studies*, 17:2, 11-37.

Knight, F.H. 1964 [1921]. *Risk, Uncertainty, and Profit*. New York: Augustus M. Kelley.

Kotowitz, Y. 2008. 'Moral Hazard.' In S.N. Durlauf and L.E. Blume (eds.), *The New Palgrave Dictionary of Economics Online*. New York: Palgrave Macmillan.

07 March 2016, DOI:10.1057/9780230226203.1138.

Laffont, J-J., and Martimort, D. 2002. *The Theory of Incentives: The Principle-Agent Model*. Princeton, NJ: Princeton University Press.

Langlois, R.N. and Cosgel, M.M. 1993. 'Frank Knight on Risk, Uncertainty, and the Firm: A New Interpretation.' *Economic Inquiry*, 31:3, 456-465.

Leaver, A. 2015. 'Fuzzy Knowledge: An Historical Exploration of Moral Hazard and its Variability.' *Economy and Society*, 44:1, 91-109.

Mack, R.P., Arrow, K.J., and Rader, T. 1970. "Discussion." *American Economic Review*, 60:2, 461-464.

Marshall, J. M. 1976. 'Moral Hazard.' *American Economic Review*, 66:5, 880–890.

McCaffrey, M. 2015. 'Economic Policy and Entrepreneurship: Alertness or Judgment?' In P. Bylund and D. Howden (eds.), *The Next Generation of Austrian Economics: Essays* *in Honor of Joseph T. Salerno*: 183-199. Auburn, AL: Ludwig von Mises Institute.

Mirrlees, J.A. 1999 [1975]. 'The Theory of Moral Hazard and Unobservable Behavior: Part 1.' *Review of Economic Studies*, 66:1, 3-21.

O'Leary, M. 2015. 'Work Identification and Responsibility in Moral Breakdown.' *Business Ethics: A European Review*, 24:3, 237-251.

Pauly, M.V. 1968. 'The Economics of Moral Hazard.' *American Economic Review*, 58:3, 531-537.

Penrose, E.G. 2009 [1959]. *The Theory of the Growth of the Firm*. 4th ed. Oxford: Oxford University Press.

Queiroz, R.M.C. 2015. 'Putting Ethics and Economic Rationality Together: an Aristotelian and Philosophical Approach.' *Business Ethics: A European Review*, 24:3, 332-346.

Rothbard, M.N. 1998. *The Ethics of Liberty*. New York: New York University Press.

———. 1997. 'The Myth of Efficiency.' In *The Logic of Action One*: 90-95. Cheltenham, UK: Edward Elgar.

———. 1974. 'Justice and Property Rights.' In S.L. Blumenfield (ed.), *Property in a Human Economy*: 101-122. La Salle, Ill: Open Court.

Rowell, D., and Connelly, L.B. 2012. 'A History of the Term "Moral Hazard."' *Journal of Risk and Insurance*, 79:4, 1051-1075.

Stone, D.A. 1999-2000. 'Beyond Moral Hazard: Insurance as Moral Opportunity.' *Connecticut Insurance Law Journal*, 6:1, 11-46.

Vranceanu, R. 2014. 'Corporate Profit, Entrepreneurship Theory and Business Ethics.' *Business*

*Ethics: A European Review*, 23:1, 50-68.

Weinman, J. 2010. 'The Market for "Melons": Quantity Uncertainty and the Market Mechanism.' *Unpublished manuscript*. Available at: http://www.JoeWeinman.com/Resources/Joe_Weinman_The_Market_For_Melons.pdf .

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[1] Importantly, discussions of insurance existed for centuries without reference to moral hazard. In the Middle Ages, for instance, some Catholic scholars viewed random events as acts of God. They therefore had no notion of the insured influencing the probability of loss. When moral hazard did eventually appear in the insurance literature, it was often conflated with adverse selection (Rowell and Connelly 2012).

[2] It was believed underwriters could mitigate moral hazards by cautiously evaluating clients and carefully writing contracts. Character and contract were understood as moral problems, and insurance was initially regarded as a controversial moral enterprise.

[3] Exceptions are Langlois and Cosgel (1993) and Rowell and Connelly (2012), which mention Knight's application of moral hazard to economic organization.

[4] By taking this dualistic view of uncertainty, Knight builds on economic and moral foundations. He thus diverges from later economists, who, starting in the 1970s, began to think of moral hazard strictly as a knowledge problem, specifically, of uncertainty caused by asymmetric information. My own thesis is that a theory of moral hazard that clearly captures its economic and moral aspects is more useful for researchers than one focused excessively on economics. The latter often results in moral implications simply being overlooked rather than eliminated.

[5] For instance, "In some cases, including the entrepreneurial context, uncertainty includes not only uncertainty about others' actions, but also uncertainty regarding the courage and willingness of others to act" (Emmett 2011: 1142).

[6] In conventional insurance, the insured party shifts the burden of uncertainty to the insurer, along with the responsibility for making sound decisions about contractual obligations. The insured can therefore enjoy the benefits of decision-making responsibility while paying less than the full cost. Similarly, when incentives conflict within the firm, individual moralities do as well; hence, moral hazard. In fact, Knight believes this problem to be so deeply engrained that "nothing but a revolutionary transformation in human nature itself" could truly eliminate all moral hazards within the firm (Knight [1964] 1921: 253-254).

[7] Furthermore, Leaver (2015) shows, contra Baker (1996), that moral hazard theory did not seriously influence either economics or public policy until the late 1980s.

[8] The terminology of Arrow's 1963 paper is different from his earlier work. In a 1962 article, for example, he referred to moral hazard as "the moral factor." By using "factor," he more clearly emphasized moral forces at work in the individual's decision process (as opposed to the impersonal "hazard"). By 1963, however, he adopted the more conventional "moral hazard." To my knowledge, no one has pointed out the change in terminology, or that it might indicate an amendment to Arrow's view of the moral element. Whether he changed his mind or not though, it is possible Arrow's use of "moral" reflected its early usage in probability theory, where it meant simply "subjective," referring to the subjective probability of events from the point of view of risk-averters (Dembe & Boden 2000). Consequently, "behavior that promotes rather than avoids risk is considered to be inconsistent with a moral (that is, rational) ordering of probabilities" (Dembe & Boden 2000: 262). If this is indeed Arrow's view as well, his use of moral hazard is morally ambiguous: historically, at least, it would imply a value judgment, despite appearing neutral as a stand-alone economic term.

[9] Weinman (2010) appears to agree with Pauly that rational behaviour and immoral behaviour do not intersect. Queiroz's (2015) argues economic and ethical rationality can be brought together using an Aristotelian framework.

[10] Hale (2009) argues that Arrow and Mirrlees mischaracterize Pauly's argument. Hale believes Pauly meant only to claim that moral hazard and rational behaviour have little overlap, rather than none. Hale does not elaborate on his reasoning though. In any case, the literature has sided in favor of the Arrow-Mirrlees interpretation.

[11] For this argument to work, social optimal behavior must be moral. This is by no means certain though. For instance, although optimality is defined by Arrow (1963, 1968) in terms of economic efficiency, Baker (1996) and Hale (2009) imply efficiency is a poor grounding for moral judgments. Further, other research argues that the language of efficiency, although supposedly scientific, also conceals important value judgments (Rothbard 1997).

[12] Claassen (2015) also hints at the feasibility of this type of approach.

[13] A defense of this theory and critique of alternatives falls outside the scope of this paper; instead, my goal is simply to describe its application to the morals of moral hazard.

[14] The scope for contracts is narrower in the title-transfer theory than it is in the expectations-promises view, because there are certain things that cannot be transferred, and thus contracted. As one author puts it, "An adequate title-transfer model must distinguish between alienable and inalienable goods. One cannot sell one's "true gratitude" [for instance], because it is the product of an inalienable attribute—the will" (Evers 1977: 7).

[15] This is consistent, for example, with O'Leary's (2015: 237) definition of fraud as "intentional deception through concealing or misrepresenting information that harms the financial interest of another person(s) and benefits the financial interests of the perpetrator."

[16] This assumes Jane and Robert are rightful owners of their property to begin with. However, the title-transfer theory can also deal with alternative cases, for instance, a situation where Jane uses the housing deception to reclaim stolen property (Rothbard 1974).

[17] Hale's (2009) discussion of hidden action focuses on how individuals might increase risky behavior when insured, not on how they might violate contract, as in the case of the worker who produces less because his employer cannot perfectly monitor his contribution.

[18] "Active shirking" is somewhat redundant, but helps make the general point clearer.

[19] Hale (2009) argues arson is immoral. Yet for reasons not pertaining to insurance, he concludes that moral hazard and immoral decisions like arson are distinct. But in cases of burning one's own property, arson is morally problematic precisely *because* it violates an insurance agreement; this fact is even included in some definitions of arson. Yet outside insurance agreements, "committing arson" against one's own property means simply burning it. Absent mitigating circumstances (such as threats to the property of others), burning has no special moral significance.

[20] Similar reasoning applies to other economic descriptions of behavior under moral hazard, such as "[continuing] to spend after marginal benefit falls below marginal cost" (Marshall 1976: 880), "extra costs that are incurred because of the increased use of [resources] by an individual" (Durbin 1997: 20), and "rational indifference to level of consumption at zero marginal cost" (Weinman 2010: 7). Any of these *could* be immoral, depending on whether the agent-consumer violates a contract, say by "over-consuming," but none *must* be.

[21] The definition of moral hazard discussed in this section is not restricted to the sphere of contracts, and is applicable to a wide range of cases. Cf. the discussion of future research opportunities in the conclusion.

[22] In the original, Hülsmann appears to mean "wary" rather than "weary."