

*Civilization
can be seen
as the gradual
evolution of
ever more
creative risk
management.*

COWBOYS VERSUS CATTLE THIEVES

The Role of Innovative Institutions in Managing Risks along the Frontier

Civilization can be seen as the gradual evolution of ever more creative risk management—from the family and private property to derivatives and structured financing arrangements. The goal is to permit an ever-greater scope for the prudent assumption of risk. Because knowledge is dispersed, only that expanded scope offers any hope of fully using the varied skills of all the peoples of this planet. Civilization is the story of the advances and retreats of such prudent risk management expansions.

Civilization makes it possible to better manage risks in the financial, technological, and social fields. Indeed, a reasonable metric for assessing the level of civilization is mankind's success in evolving institutions that permit an ever-larger scope of prudent risk taking. Prudence is best defined as a careful calculation of the risks of change versus the risks of stagnation—and the development of institutions that encourage that careful balancing.

Risk management is most important and least developed at the frontier of civilization. There, not only do new risks emerge, but also old risks are encountered in new guises. Moreover, innovation on the frontier is undertaken by individuals who are self-selected risk takers. Finally, the institutional arrangements for managing risks in these areas are often embryonic. Note that the cowboys of the Old West were often portrayed as renegades and misfits, yet they played a critical role in policing borderless boundaries—reducing the risks to the cattle herds

from wandering and rustling. Indeed, until the advent of barbed wire, the cowboy was the central feature of the risk management landscape, as well as perhaps the most often misunderstood.

Most individuals attracted to the frontier share similar goals—love of adventure, the spirit of competition, the thrill of innovation and discovery, and the willingness to take chances. It is not always easy to distinguish legitimate entrepreneurs and risk managers from frauds and miscreants. A thin line separates the cowboy from the rustler—in some cases, cowboys succumb to the weak monitoring of their activities and themselves become the cattle thieves.

Of course, all organizations face this traditional principal/agency risk—the risk that an employee will take advantage of his localized knowledge and power to advance his personal agenda at the expense of the organization. The confusion that characterizes activity on the frontier makes this all the more likely. And the focus on the novel risks present along the frontier too often leads to weakened scrutiny of traditional risks. Often old errors occur in these new settings, largely because they are not recognized as such and the older risk management strategies are less effective in the new setting.

And, when the inevitable errors do occur and potential risks become real losses, the instinctive response is often to retreat, to restrict the innovation. Rarely do policy makers consider whether existing policies might have made such losses more likely or whether modifying or strengthening some element of the competitive process might have reduced them. Too often, the inevitable losses associated with the trial

*A thin line
separates the
cowboy from
the rustler.*

and error process lead to quixotic attempts to seek a trial without error approach.

The Enron story follows this scenario. That Enron was staffed with cowboy entrepreneurs is not disputed. The real question is: When, where, how, and why did some of these legitimate risk-managing cowboys stray and become rustlers? And, more important, why did the traditional safeguards that had prevented such straying in earlier years fail? Why did the institutions—both private and political—designed to detect and prevent such a migration from legitimate entrepreneurship to abusive corporate malfeasance cease to discipline Enron management?

Many critics seem to believe that it was the company's involvement with novel financial products such as derivatives and structured finance that led to its financial losses. Had Enron avoided such complex and poorly understood innovations, it would have escaped its subsequent fraud and deception problems. Wrong, wrong, wrong! ... Enron's problems arose from more traditional business mistakes—paying too much for acquisitions, acquiring companies that required management skills that Enron did not possess, and failing to put in place internal checks and monitoring requirements to ensure that employees were adhering to corporate policy. Enron's failures largely reflected the mismanagement of the traditional risks faced in any corporation—the “old cloudy wine in new but equally cloudy bottles” problem.

Enron did operate at the frontier. Its corporate financial policy, specifically its innovative ways of raising funds for its often-creative energy market activities, were pathbreaking. Some of Enron's corporate financing innovations ... have been adopted by most global energy market participants as legitimate financing methods. Enron's derivative

operations were actually largely profitable; they reduced rather than increased the overall riskiness of its operations. Enron's financial market maker role allowed other firms to reduce their commodity price and inventory risks. In brief, Enron's frontier-area activities in financial markets appear to have reduced overall societal risk. It is true that Enron's operations at the corporate finance frontier did leave it somewhat exposed. Still, Enron's problems arose less from the innovative nature of its financing strategies than from its failure to adequately monitor the use of these innovative financial instruments.

Doing so, of course, was not easy. Traditional accounting and tax reporting rules proved inadequate to clarify the riskiness of the special purpose entities, stock options, and other innovations implicated in the Enron fall. The procedures developed to ensure prudent business practices in the tangible asset-based sectors of the economy failed to keep pace with Enron's increasingly complex—sometimes overly complex—financial activities.

Enron's problems, it should be noted, emerged only after the firm had shifted from a traditional energy firm focused on the distribution of oil and natural gas to a new economy firm dealing with the financial aspects of these physical energy transactions. After the partial deregulation of the 1990s, Enron's management began to see its comparative advantage as managing the virtual rather than the physical aspects of energy production and distribution. Enron pioneered the now famous asset lite strategy In this brave new world, Enron would allow others to manage the physical flows; it would focus on managing the financial risks associated with these flows. Enron's background as an energy services firm gave it the knowledge needed to address these risk issues,

*Human nature
has changed
little over
recorded history.*

to design new financial instruments and strategies to help manage these energy-related financial risks. Enron also provided liquidity to make these emerging markets possible. Despite later monitoring failures, Enron's innovations in these areas were beneficial.

Enron's losses reflected the misuse of its creative innovations. It was its failure to prevent dishonesty and misrepresentation in this new setting that triggered the disaster.

The outrage over the Enron experience reflects in part the egalitarian concern that such innovative financial practices—even when honest—generate excessive profits. Yet, as Joseph Schumpeter noted long ago, extraordinary profits are “the baits that lure capital on untried trails” (Schumpeter, 1942, pp. 89-90). This confusion at the frontier, coupled with year after year of continued high profits, led many in corporate management to fall asleep at the switch. The errors and crimes now uncovered would have been less likely had Enron been operating in the “interior” of the economy. Still, Enron's innovations remain valuable; its failures demonstrate the nature of man, the fallen angel, rather than man the manipulative genius. Enron demonstrates that trial and error can be extremely costly. Yet, it remains the only viable path to the future. Trial without error is a utopian fantasy.

Risks and Culture: Values and Attitudes Toward Risk

Human nature has changed little over recorded history. Humans value the immediate more highly than the more distant—both in time and space.

We emphasize those things that affect us rather than others, and we continually face conflicts of interest between competing goals—for example, more food today versus the potential tightening of our belts tomorrow. And all this occurs in an environment where mistakes have consequences, often very painful consequences. Effective risk management institutions, therefore, create incentives relevant to man as he is—not man as we would have him be.

Douglas and Wildavsky suggested that cultural factors determine the way in which various societies respond and adapt to risk (or, more exactly, those risks that are not directly relevant to that individual). Attitudes toward such risks, they argued, are best viewed as “selected” to reinforce the legitimacy of the values they hold. Risks, in effect, aren’t “out there” but rather are “internal constructs” useful for structuring a complex world. Douglas and Wildavsky (1982) defined four cultural values that they believed captured much of the varied views various peoples and societies hold toward risk and how best to manage it: fatalism, hierarchy, individualism, and egalitarianism.

Fatalism

The fatalist believes that risk is random. The appropriate response is to resign oneself to whatever fate the capricious gods might dole out. Progress is an illusion; whatever one person gains, another has certainly lost. Wealth creation and the prudent risk-taking activities necessary for its advance have little traction in such cultures. In fatalist cultures, prudence is irrelevant since risk is random. Fatalists aren’t political—there’s no use fighting city hall!

*There are few
risk takers in
societies where
the potential
of action is
viewed as nil.*

Such extremely risk-averse societies were characteristic of man's early history—when our powers were weak compared to nature and our understanding of the world was rudimentary. Even today, many non-developing nations and some minorities within developing nations adhere to this dead-end cultural value. There are few risk takers in societies where the potential of action is viewed as nil and where the successful individual is seen as harming others. The fatalist culture gives way to more change-oriented cultures only when forced to do so by external circumstances or by internal collapse.

Hierarchy

Hierarchists believe that society should be ordered—that those most expert, most capable of leading society should be granted power and authority. Risk taking is necessary, even valuable, but the risks must be carefully monitored and supervised by the wise. Prudence is best ensured by leaving the decision as to which risks can be taken in the hands of those most qualified to decide for all.

Traditional societies and much of modern society have long been organized along hierarchic lines. The tribe or hunting band looks to the headman or chief to decide which risky actions should be banned and which encouraged. Today, similar faith and power are given to bureaucrats manning the various centralized political risk management institutions—the Securities and Exchange Commission (SEC) Environmental Protection Agency, Commodity Futures Trading Commission, Food and Drug Administration—and a host of other risk management agencies.

*In practice,
hierarchical risk
managers
seek trial
without error.*

Hierarchic regulators realize that risk taking is essential. However, they are the sole arbiter of what constitutes “prudent” risk. Note that hierarchic regulators do not capture the full gains of prudent risk taking (regulators are rarely residual claimants). However, they will face heavy criticism if their approval leads to some mishap. As a result, hierarchic agencies tend to adopt some variant of the Precautionary Principle—the policy that the risks of innovation should generally be weighed more heavily than the risks of stasis.

In practice, hierarchical risk managers seek trial without error and thus, in practice, tend to slow or even ban institutional and technological change. Hierarchic risk managers operate at some distance from the actual risk-taking activity, which makes it very difficult for them to incorporate the specialized knowledge that is dispersed widely. Further, the costs incurred in gaining approval to take some specific risk discourage some innovations.

Hierarchic societies can be very stable—there are few internal tensions to encourage reform.

Regulators typically liberalize their anti-change rules only when faced by external competitive pressures from less restrictive risk management regimes (other political jurisdictions, for example). National hierarchic cultures are even more stable. For example, Japan, after its civil war, moved to create a stable world and largely succeeded. Change did not occur until the Europeans entered Asia in force in the 19th century.

*By opening
the frontier to
entrepreneurial
risk takers,
individualist
cultures have
greatly
accelerated
economic and
technological
growth.*

Individualism

Individualist societies view risk as largely a personal matter—especially in areas where institutions are believed adequate to contain and target the impacts of risk taking. Society’s role is to develop generalized rules to assign responsibility and to ensure that the consequences of individual actions are isolated. (Individualists tend to believe that this separation has largely been achieved.) Individualist societies arise both as risk-targeting institutions allow the risks associated with an individual decision to be localized and as external pressures on hierarchic societies force liberalization. Individualist cultures enlist a greater fraction of the citizenry in the critical task of exploring the economic frontier. Because risk taking is individualized, each person is able to use the information that he or she alone possesses—thus society benefits from dispersed information unavailable in hierarchic risk management systems.

Individual risk taking requires, of course, a wide array of institutional arrangements to ensure that the well-being of the society isn’t endangered by the careless acts of a few aberrant members. Modern society . . . has evolved a wide array of institutions—private property, contracts, and the rule of law—to advance that objective. These generalized rules make decentralized risk taking more palatable to the society’s more risk-averse members. Moreover, as risks are incurred and sometimes disasters result—that is, when the potential risks of the trial and error approach become reality—individualist societies respond by seeking out new

institutional arrangements to reduce the likelihood of a reoccurrence of such disasters. By opening the frontier to entrepreneurial risk takers, individualist cultures have greatly accelerated economic and technological growth.

Egalitarianism

In modern societies, the major struggle is between hierarchic and individual risk management. Yet, the policy debate often focuses on another cultural value—the egalitarian concern over whether risk taking is compatible with fairness. In a society already characterized by vastly different rewards and status, egalitarians worry that entrepreneurial risk taking, if successful, will worsen existing inequities. Initially, new technologies will be available only to the powerful; thus, any wealth or life quality improvements that might result will accrue only to the few. Besides, egalitarians argue, while the innovator will gain the benefits, the risks are too likely to fall largely on the downtrodden. For such reasons, modern egalitarians increasingly view change negatively. The world is too fragile and change too likely to prove destructive to allow hierarchic—much less individual—risk taking. We should not expend time or energy in the impossible search for ever-greater economic and technological growth; rather, we should seek fairness by finding ways to equate wealth and power in the current world.

In many ways, the modern egalitarian has returned to the negativism of the fatalist. Unlike the fatalists, however, egalitarians do have a political agenda. Believing that change makes the world a less fair place, they view our planet and our societies as extremely fragile—one misstep and disaster is ensured. Thus, they oppose all novel risks: biotechnology,

How can any central authority understand in a timely fashion the ever-changing local situation?

global warming, and derivatives. In a world that has become freer (satisfying those seeking greater individual freedom) and wealthier (reassuring those seeking a well-ordered society), the egalitarian perspective has become more significant. And, because total opposition to all change would render them politically irrelevant, egalitarians seek instead ever-stricter hierarchic regulation, seeing in that approach their best hope of blocking, or at least delaying, change.

The Evolution of Risk and Culture

The hierarchic enterprise-wide approach to risk management has many virtues for individual firms. Indeed, the firm itself is best seen as an institutional arrangement for managing and coordinating the various risks associated with the production and marketing of goods and services. The managers of the firm can more readily consolidate positions and exposures for integrated risk measurement, can more easily monitor the evolving risks, can more readily address those risks as they are revealed, and can adjust the overall risk profile of the firm to that desired by its shareholders.

In contrast, socially centralized and hierarchical risk management (e.g., SEC regulation) is far less adaptable to tailored risk management. Neither the SEC nor any other centralized political risk manager is able to make full use of the knowledge dispersed across the numerous market participants. Those localized individuals who will benefit or lose based on the wisdom of specific investment decisions are far more knowledgeable about the prudence of a specific financial risk, yet their knowledge is

inaccessible to the bureaucrats. The complexity and tempo of modern financial markets, moreover, makes them extremely difficult to monitor. How can any central authority understand in a timely fashion the ever-changing local situation? How can they ensure that their policies are being implemented? Individuals with the wisdom and foresight to accomplish that task may exist but they are unlikely to be found in governmental agencies.

As noted earlier, the fact that the gains from innovation accrue to the innovator and not the regulator creates a residual claimant problem—the regulator bears the risks of approval but does not gain the economic rewards that might accompany that approval. These difficulties encourage political regulators to move slowly, to shy away from approving any novel technology. It also makes them susceptible to any information suggesting reasons for delay or denial. Because successful innovations threaten existing economic interests, the centralized regulator will be lobbied fiercely by competitors providing many reasons why the innovation is too risky for approval. An interesting example of this special interest effort to block technology was Edison's efforts to frighten America away from alternating current; that ban would have made direct current—his entry into the electricity sweepstakes—a winner.

Political agencies also are influenced by *realpolitik*. They will consider more carefully the impact of their decisions on the powerful—and those relying on current technology and arrangements will generally be more powerful today than the innovators representing tomorrow. Powerful groups may be allowed risk-taking privileges denied to those perhaps better prepared to incur such risks. Again, the evidence on the riskiness of the innovation will be weighed more heavily. And if such preferred

*Market prices
guide firms
toward prudent
risk taking.*

firms or individuals incur losses, they may find themselves reimbursed from taxpayer funds.

That passive fatalistic societies would gradually be replaced by limited risk-accepting hierarchic cultures is understandable, as is the fact that competitive pressures would gradually liberalize centralized hierarchic regulatory systems. In time, individualistic risk-taking schemes would gain greater sway. However, we should not be surprised that egalitarians, distrustful of both individualism and hierarchy, would urge retreat from innovative risk taking whenever errors—inevitable in a system of trial and error—occur. The history of mankind’s gradual effort to manage risk ... is a tale of slow advances and many retreats, sometimes for centuries. Even today, most financial risks are heavily regulated by a host of political risk managers. And, as the response of the administration and Congress to the Enron crisis demonstrates, this progress is fragile, all too easily reversed when disasters occur.

History suggests that civilization is never secure. The innovative entrepreneurial society has no deep roots, and few passionate defenders. Yet, hierarchic regulatory bureaucracies are poorly designed to balance the risks of innovation against the risks of stagnation. In contrast, the competitive marketplace encourages that balancing very well. A business would always prefer to play it safe; yet, in competitive markets, the firm that spends nothing on R&D will soon be outflanked by firms that do make such productivity and quality-enhancing investments. Market prices guide firms toward prudent risk taking (rising prices suggest the value of investments in that area). If their intuition is correct and their innovation proves viable, they may well profit handsomely, attracting

other resources to this new field. Prices signal the risks for which prudent investment is warranted; profits determine which investments are appropriate. Together, these competitive market forces guide risk taking at the economic frontier.

However, both fatalist and egalitarian values are biased against such competitive risk management. Fatalists lack any confidence that risks can be managed. Egalitarians fear the inequities that reliance on prices and profits might create. Moreover, the hierarchic view that centralized risk management offers greater security does have deep roots. Current society is influenced by the fact that for many millennia we obeyed the autocratic leadership of tribal priests and chiefs. Taboos blocked risk taking on all sides to protect the tribe against the risks of the wayward individualist. Given the fact that early societies operated close to the edge—even minor setbacks might well lead to the destruction of the tribe—these anti-innovation rules had some validity. Moreover, for much of mankind’s prehistory, the risk-management institutions that today help to isolate risks, targeting their impact on those directly involved, were weak or nonexistent. In that era, competitive regulation of risks was often unfeasible. This prehistory has left society with a profound bias toward “priestly” control over risk taking. Even today, many believe that “objective” experts freed from any economic motive are far more likely to choose wisely for society than would economically motivated individuals disciplined by competitive markets.

That instinctive preference for hierarchic control over change often leads—in times of crisis—to the imposition, or reimposition, of centralized regulation. This weakens the evolving competitive forces that promise to make such disasters less likely in the future. Indeed,

political intervention in response to economic mishaps often increases risk from moral hazard—the tendency of individuals to act in a riskier fashion if they believe any costs of such risks will be borne by others. In America, for example, the bank collapses of the 1930s led to federal deposit insurance, the “hostile” takeover battles of the past half century led to state and federal rules strengthening traditional management against outsiders (and weakening the incentive of outsiders to monitor errant performance by corporate managers), and failing corporations (airlines most recently) were granted access to federal loan guarantees. These interventions undermine competitive pressures for prudent risk taking.

Institutions that alleviate the pain when risks become reality and socialize the losses associated with those adverse events misdirect resources and energies toward imprudent risks. We spend too little in areas where prudent risk taking would be beneficial; we spend too much on imprudent risks in areas that have been socialized. Also, we weaken the incentives of the parties most knowledgeable about risks to innovate, to explore improved ways of focusing the gains and losses associated with such risks.

This is an excerpt from a chapter in Corporate Aftershock: The Public Policy Lessons from the Collapse of Enron and other Major Corporations, ed. Chris Culp and William A. Niskanen (Hoboken, NJ: John Wiley & Sons, 2003).