

Corporate Leadership in an Uncertain World

by DOUGLASS C. NORTH



Douglass C. North, co-recipient of the 1993 Nobel Prize in Economic Science, is the Spencer T. Olin Professor in Arts and Sciences at Washington University. Dr. North is a member of the American Academy of Arts and Sciences and a Fellow of the British Academy. He is a frequent advisor to the World Bank and to countries around the world on issues of economic growth.

The evolution of Dr. North's wide-ranging research interests in economic institutions and economic change is expressed in ten books, including *Institutions, Institutional Change and Economic Performance* (Cambridge University Press, 1990) and *Understanding the Process of Economic Change* (Princeton University Press, 2005).

The Annual Essay

Each year, The Conference Board publishes in its Annual Report an original and timely commentary by a leading economic or management thought leader. Past essayists have included Warren Bennis, Jim Collins, Peter Drucker, Dale Jorgenson and Paul Volcker.

Does understanding how a political-economic system functions help us to understand how a business organization within that system functions? The answer is clearly yes. In both cases, structures are created to organize markets; the efficiency of the resulting exchange will determine performance, whether of the economy as a whole or of the individual enterprise. Businesses are themselves concentrated institutional structures that, like the markets they operate in, are always fine-tuning their organizations to perceive the world more accurately and to evolve strategies that help them perform. In short, businesses, like economies, organize labor, develop incentive structures, apply knowledge and technology, and monitor their own performance.

Also, in the complex interdependent world we have created, efficient business organization is intimately tied to the performance of the overall economy. But we only imperfectly understand the very complex nature of economic systems and the way they change. To improve that understanding and leverage it into institutions and their policies is the intellectual task of the economist. The practical challenge of the business leader is to enable this improved understanding to permeate the business organization in such a way that the organization uses it most effectively in a constantly changing world.

What is required is a deeper understanding of 1) how the mind interprets the external environment and 2) the process of decision making in a non-ergodic world – that is, a world that is evolving in new and novel ways and at an unprecedented pace. Let us explore each issue.

First, by what means does any of us understand the external environment? The senses – eyes, ears, nose, and feel – send signals to the brain, which then constructs an interpretation of the external environment. This interpretation is reinforced or weakened as the senses provide additional signals consistent with it or at odds with it. Our beliefs are subjective interpretations made possible by the impressive development in humans of larger brains, language, and consciousness – that is, self-awareness of ourselves in time and space. The result is elaborate belief systems that explain where we are in time and space. Explanations – theories – account for our

current environment and how we got there. But they are subjective and at best only partly correct.

In fact, history shows that our theories have been wrong more often than right, resulting in the demise of whole civilizations when we have misinterpreted what is happening to us. Given that only a small percentage of businesses around today were also present 20 or even 10 years ago, survival is a threshold challenge for businesses as well. We improve our chances of survival by continually developing better theories, grounded in empirical evidence of the ever-changing environment. Survival depends on a complex institutional structure that will provide the correct incentives for humans to continue to evaluate their surroundings critically and undertake the necessary changes when the evidence derived from additional information suggests the need for revision.

There is no guarantee that the essential institutional structure will, in fact, evolve. Indeed, throughout history, societies have disintegrated because they have failed to create such a framework. The rise and fall of the Soviet Union is the most recent dramatic illustration. I believe that the same issues are applicable to business organization and how it changes.

The second issue is that it is a non-ergodic world. If the world we are trying to understand remained constant and unchanging, then the lessons from past experience would serve as a guide to future choices. And, indeed, much of the theory developed in the social sciences assumes such a static environment. But if we human beings are continually modifying our external environment, the lessons from the past would help us solve future problems only to the extent these problems are similar to those of the past. Many of them are; but we are also creating new and novel worlds unlike anything in the past, and understanding what is happening to us is essential for our continual survival. How should we deal with such uncertainty? We can get some clues by looking at how humans have confronted uncertainty in the past.

Lessons from History

Throughout most of the human experience, the uncertainty humans have faced has been a consequence of the physical environment. Climate, weather, and earthquakes were the primary sources



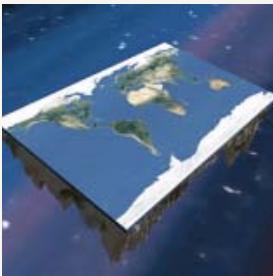
of uncertainty to be overcome or at least contained. The development of agriculture some ten millennia ago was a major breakthrough because it permitted humans to expand the resource base rather than, as hunter/gatherers, simply exploit the existing one. The result was the creation of civilization as we know it. But the consequent political, economic, and social structure that evolved became ever more complicated, and the uncertainties of human interaction – the human environment – replaced those of the physical environment as the most significant.

These uncertainties arise from transaction costs, which are the costs involved in human interaction, specifically the costs of measuring what is being exchanged and of enforcing agreements. That rather innocuous-sounding assertion is at the heart

Everything economists have learned since then reinforces this assertion.

Impersonal exchange – exchange between parties with no knowledge of each other and occurring over time and space – not only runs counter to innate genetic features of humans that evolved over the several million years that humans were hunter/gatherers; it also is simply an open invitation to fraud, cheating, and corrupt practices. In fact, in the absence of the essential institutional safeguards, impersonal exchange does not exist except in cases where strong ethnic or religious ties make reputation a viable underpinning.

What is required is a political institutional structure that will put in place the rule of law and the necessary enforcement structure. The need to establish



We are creating new and novel worlds unlike anything in the past, and understanding what is happening to us is essential for our continual survival.

of the problems of economic efficiency. Throughout most of history, exchange has been based on personal knowledge of the other party. Reputation and repeat dealings have been the basis for confidence that the exchange would be lived up to in terms of both the quantity and the quality of the good or service exchanged and that the agreement would be executed in accordance with the understanding of both parties. Transaction costs in such cases were small. But also, markets were of necessity small.

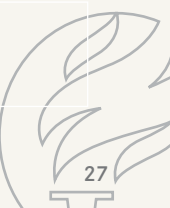
As long-distance trade expanded in the Middle Ages, the difficulties of exchange between parties that did not know each other posed fundamental transaction cost problems. At the champagne fairs in France in the twelfth century, one merchant was designated to collect information on the reliability of the merchants attending the fair; when contemplating an exchange that was not instantaneous, a merchant would seek advice from the designated merchant on the reliability of the other party. But extending personal knowledge by such devices has limits with respect to the size of markets. And Adam Smith, the patron saint of economists, was unequivocal in his assertion that specialization, division of labor, and the size of markets are the source of the wealth of nations.

such a framework to guide business is at the core of why issues of transparency and corporate governance are so important. But the fact that such a framework must substitute effectively for the “trust” that comes with personal exchange means that establishing it entails a fundamental overhaul of both the economic and the political institutions. The failure to create the essential institutional base is the central problem of economic development.

Institutions and Economic Performance

Institutions structure human interaction. They are the incentive structure of a society and are designed to reduce the uncertainties of those players in a position to alter them. To understand the role of institutions in a society, we need to explore what they are, who designs them, and why they always work imperfectly.

Institutions are made up of formal rules and informal constraints, along with enforcement mechanisms for both. Formal rules are laws, rules,



and regulations. Informal constraints are conventions, codes of conduct, and norms of behavior. Enforcement ranges from first party enforcement (humans living up to institutional requirements because they believe in them) to second party enforcement (retaliation) to third party enforcement (ranging from the force of peer approval to police, armies, etc.). All of these elements are present in the incentive structures and values-based leadership challenges of modern business organizations.

The structure of a political system, from authoritarian regimes to direct democracy, defines who makes the rules. The economic rules – property rights – are always made by whomever runs the political system and obviously are designed to reduce the uncertainties of those making them.

I can illustrate why institutions work imperfectly by exploring an analogous institutional setting – professional football. The rules, devised by the owners in the interests of maximizing their revenue, include both formal rules and informal norms (such as not deliberately injuring the quarterback of the opposing team); and there is an enforcement mechanism (referees, with the right to impose penalties for rule infractions). In fact, the way the game is actually played depends on the incentives and disincentives that arise from the complex interaction of the parties – owners, players, and referees. Taking out the quarterback of the opposing team may have a payoff that vastly exceeds any penalties, even assuming that the referees could perceive the action and judge it deliberate. The incentive structure of the rules, the accurate measurement of performance, the behavioral norms of the participants, and the effectiveness of penalties all lead to wide variation in actual performance, as even the most casual observation of the game attests.

The operation of a political-economic system has all these features plus one crucial additional source of variation – the game is continually changing as the participants evolve new aspects of it. The result is a crucial complication and uncertainty not present in a static setting. Survival in a non-ergodic environment requires that the participants understand the implications of the evolving environment and make the necessary changes to ensure survival in such a setting.

A Dynamic World

Even the most cursory view of history makes one aware of the radical change that has occurred in the human condition. The uncertainties have shifted from those of the physical environment to those

of the human environment, and we have only a vague understanding of the complexities of the latter. Indeed, uncertainty is the norm; risk assessment involves probabilities that are based on the past but of only limited use in responding to the future. The structure of society and, in this case, the business organization must enable uncertainty to be incorporated into decision making.

Individual social science disciplines give us insights into individual parts of a society, but these disciplines are seldom woven together to give us a comprehensive picture of how a society operates; and they are static – telling a story at an instant of time when what we need is an integrated story over time. Nor do these disciplines confront the problem of understanding new and novel problems: How do the minds of those in charge of institutional change come to comprehend what is happening to us?

It would be comforting to believe that humans have been prescient enough to understand what is happening to themselves and act accordingly. But going back to the first issue – the way the mind understands the external environment – the beliefs humans construct to explain the external world are frequently incorrect, particularly if the changes are creating really novel situations. And clearly, humans have evolved environments radically different from anything that existed before. Can we create an institutional environment that will deal imaginatively with novelty? There are success stories: the United States has evolved more or less successfully over more than two centuries. How did that happen?

The institutions created with initial settlement of the colonies were those carried over from Britain, which by the seventeenth century had begun to evolve property rights in land that encouraged individual ownership and was also in the course of creating what we view today as common law. Moreover, the colonies were not considered very important to England in the early stages and were therefore granted substantial autonomy and self-government. By the time the colonies became independent, they had the essential institutional underpinnings necessary for a productive economy and polity. Indeed, the Constitution was built up from the political and economic experiences of the colonies.

This was in striking contrast to the Latin American experience, where Spain, in its successful pursuit of “treasure,” provided no self-government and economic activity was generated by monopoly grants to individual merchants seeking to mine and export gold and silver. When Latin American countries (of Spanish origin) achieved independence, they



frequently copied the U.S. Constitution, but absent the informal rules and enforcement that had evolved during the American colonial experience, the results were a half-century of recurrent civil war and subsequent instability.

The propitious character of early U.S. development explains how, with good fortune, we got it right to begin with. It does not explain the successful subsequent dynamic development as this country evolved from a rural small-scale society of about 5 million to a rich urban superpower of almost 300 million. Have we always known what we are doing? Clearly not, as miscues like the Civil War, one of the most costly and deadly wars in history, attest. (However, the historical heritage had created an institutional framework that produced rapid recovery, and today the South is a dynamic partner in the

overall economy.) We have made many mistakes and still do. Indeed, the very nature of a non-ergodic world assures you that will happen.

The structures of both society and the business organization must enable uncertainty to be incorporated into decision making.

But contrast the U.S. story with the history of the Soviet Union. The institutional framework of the former created an adaptively efficient structure, while the latter was rigidly constrained. The former encouraged trial-and-error experimentation, the latter did not. The development of an open access society – one that encourages entry into political and economic markets – creates an institutional framework that encourages such experimentation in the face of the uncertainties of novel change. The Soviet Union, founded on a set of beliefs that “knew the truth,” could make only superficial reforms in the face of increasing stagnation. Both societies were constrained by their heritage, which determined the flexibility of the resulting institutional structure.

Open-access societies confronted with uncertainty will produce an adaptively efficient structure. But it should be carefully noted that there is no guarantee that open-access societies will remain that way. The pervasive search for security in a competi-

Business Organization and Adaptive Efficiency

How much of this is relevant to modern business organization? Clearly, the dynamic success of the overall economy plays a critical role in the opportunity set of an individual enterprise. But more than that, the individual enterprise in a dynamic world is similarly confronted by uncertainty and must make choices that can be guided only partially by past experience. All the sources of uncertainty for an evolving economy are equally important for an individual enterprise – changes in information costs, technology, and competitive conditions. And all the sources of imperfect choices in devising institutions to deal with evolving uncertainty are equally applicable to the individual enterprise.

The constructions humans create to confront novel change in the overall economy or in individual markets require making choices in the face of uncertainty, and success is dependent on an adaptively efficient approach. In the case of the overall economy, improving the chances of successful survival depends on an institutional structure that:

1. creates a hierarchy in which the decision-making entrepreneurs have the interest of the economy as a whole, rather than their own private interest, at heart;
2. is adaptively efficient, encouraging experimentation in the face of the uncertainty that results from confronting new and novel problems; and
3. evolves decision mechanisms that reward success – and eliminate failures – arising from trial-and-error experimentation.

So, too, in the case of the individual enterprise, improving the chances of success depends on an organizational structure that:

1. creates entrepreneurs with a concern for the welfare of the overall enterprise;
2. is adaptively efficient, enabling the organization to learn, assimilate information, and adjust the organizational structure in the face of uncertainty and continuous novel change; and
3. develops incentives that reward success and mechanisms that eliminate failures that will inevitably occur – especially as a result of innovation – in a non-ergodic world.

