INSTITUTIONS AND CREDIBLE COMMITMENT

by

Douglass C. North

Washington University, St. Louis*

In this essay I intend to assess the road we have travelled in the ten years since the first conference on Institutional Economics with the objectives of suggesting where we should go from here. The suggestions will be personal reflecting both my special interests as an economic historian and my undoubtedly subjective perceptions of the road we have travelled and of an agenda of research.

The title of my essay gives away the key questions that I believe we must answer. How have economies in the past developed institutions that have provided the credible commitment that has enabled more complex contracting to be realized; and what lessons can we derive from that experience that will be of value today in the on going process of building or rebuilding economies?

The issue is straightforward: how to bind the players to agreements across space and time. Game theory provides

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the (more or less trivial) solution: players can be bound when the gains from living up to agreements exceed the gains from defecting. However, although game theorists have developed some highly ingenious models of conditions under which it is worthwhile cooperating they do not answer the key question of how to realize those conditions.[1] And while Ronald Coase has made the fundamental contribution of pointing out that when it is costly to transact institutions matter, neither he nor most of his followers have explored how property rights and other institutions come about. Throughout most of history and in much of the present world institutions have not provided the credible commitment necessary for the development of low cost transacting in capital and other markets. There is, therefore, little evidence to support the view (apparently implicitly held by many economists doctoring the ailing economies of central and eastern Europe) that the necessary institutions will be the automatic outcome of getting the prices right through elimination of price and exchange controls.

The Road We Have Travelled

It was, I believe, Armen Alchian who resurrected the study of property rights from its Marxist heritage, Harold Demsetz who elaborated some of the implications of property rights, and Ronald Coase who tried to persuade economists

[1] Kreps in his book Game Theory and Economic Modelling (1990) asserts that game theory has left untouched the fundamental question of the way the rules have evolved (p. 133)

that with positive transaction costs property rights affect economic performance. From these pioneering efforts an entire literature has evolved that is effectively captured in Thrainn Eggertsson's recent survey (1990) of what he calls "neo-institutional economics". He correctly separates the path chosen by Oliver Williamson, which is closely related to the interests of the pioneers from the path I have chosen, which seeks to discover how institutions evolve through time and why institutions that produce poor economic (and political) performance can persist. Of necessity this path has raised some fundamental research issues that have not preoccupied the mainstream path--specifically the nature of institutions, the separation of institutions from organizations, an explicit concern with political institutions, and a critical evaluation of the rationality postulate. I review each issue in turn.

In 1973 with the publication of the Rise of the Western World, Bob Thomas and I made property rights the center of our explanation of economic performance. We slighted the complicated issues of enforcement and ignored the informal constraints of conventions and norms of behavior. Since then I have become convinced that the issue of the enforcement of property rights is central to credible commitment and a major historical stumblng block to realizing the potential gains from trade and that informal norms of behavior are critical parts of the way institutions affect performance. Both the character of enforcement and the importance of informal constraints have resulted in a large literature in the past decade. In particular modes of enforcement that can occur without the state have received a great deal of attention in game theoretic literature and have been applied to shed light on historical issues. The literature on informal constraints has emphasized the way such constraints can supplement, modify, or reinforce formal rules in both the polity and the economy.

The separation of institutions from organizations is crucial if one is to get a handle on the dynamics of institutional change (North, 1990). Institutions are the rules of the game and organizations are the players. In contrast to Williamson, whose pioneering work on the governance and transaction costs of organizations has provided us with in depth insights into those issues, my emphasis on organizations is on their role as the initiators of institutional change. Entrepreneurs and members of organizations invest in the skills and knowledge which lead to revised evaluations of opportunities, which in turn induce alteration of the rules or the gradual revision of informal constraints. The kinds of skills and knowledge perceived to have a high payoff will, of course, reflect the incentives embodied in the institutional framework.

Property rights are specified and enforced by polities and without an in depth understanding of the way polities evolve it is not possible to understand the way property rights evolve. Fortunately the lacuna in our understanding has been the subject of a growth industry in the social sciences in general and in political science in particular. While the resultant literature has shed substantial light on the interplay between the polity and the economy it has had two shortcomings. It is largely concerned with the United States and gives short shrift to or ignores the third world (with Bates's work, 1981, 1983, 1989 as an important exception) and historical development (see North and Weingast, 1989, for an exception). And, it assumes the rationality postulate of economics, which takes me to the last issue.

It is one thing to assume that individuals act rationally in the sense that the term is used in expected utility theory when they go to the supermarket or participate in financial markets in the United States; it is quite another thing to make that assumption when individuals confront the complicated choices involved in making decisions about the polity and the economy that shape institutional change. The plain fact is that "there is a continuum of theories that agents can hold and act upon without ever encountering events which lead them to change their theories" (Hahn, 1987, p. 324). The result is that multiple equilibria are possible due to different choices by agents with identical tastes. It is surely time that rational choice theorists took stock of the immense and impressive literature of cognitive scientists that has long since reduced to an absurdity the notion of instrumental rationality.[2]

Credibile Commitment

All four of the issues raised above are connected with the problems of credibility. Let me elaborate on exactly what is at stake before exploring in more detail how each impinges on the problems of credibility.

In an excellent essay Kenneth Shepsle (1991) stresses that a commitment is credible in either of two senses, the motivational or the imperative. A commitment is motivationally credible if the players continue to want to honor the commitment at the time of performance. In this case it is incentive compatible and hence self-enforcing. It is credible in the imperative sense if the player cannot act otherwise because performance is coerced or discretion is dissabled (as illustrated in the case of Ulysses and the Sirens).

Commitment is not the whole solution to the problems we confront.[3] But throughout history (and in the present ailing economies) it is overwhelmingly the most pressing issue. I can highlight what is at stake by developing a simple dynamic neo classical story of economic evolution

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[2]. See C. Cherniak, Minimal Rationality (1986) for a discussion of the implications of the rationality assumption as used in economic theory.

[3]. Shepsle (1991) elaborates on the tradeoffs between commitment and discretion (pp. 249-50).

that will produce sustained economic growth and use this as a foil to explore the issues of credible commitment.[4]

A Neo-Classical Story of Long Run Economic Growth

How would a wealth maximizing absolute ruler behave towards his constituents? He can confiscate all their wealth, but such a once-and-for-all accumulation is inconsistent with maximization over time. If transaction costs were zero he could force them to work and confiscate all output in excess of subsistence; but the costs of policing are not zero. Barzel reminds us in a classic article on slavery (1977), that it pays the slave owner to give over certain rights to the slave in return for more output; the same principle applies to our ruler. He can get more income by promising to let constituents keep a portion of their incremental output. However the ruler continually faces a tradeoff between the higher income he can obtain by relaxing restrictions on constituents (thereby increasing their productivity and both their and his income) and the increasing threat to his security that the relaxed restrictions entail because his subjects have both more freedom of action and resources to overthrow him. Equally the constituents face the dilemma that the ruler may at some point renege on his promises and confiscate the accumulated wealth of his constitutents. It is at this point that both

[4]. I developed a "Neo-classical Theory of the State" in North (1981) and Yoram Barzel has gone on to expand on the implication for long run growth in "Property Rights and the Evolution of the State" (1992).

types of credible commitment enter the picture. The ruler may be able to structure the game so that it is both in his and his constituents' interest to abide by the rules--motivational credibility. Or the ruler may find that further wealth accumulation can only be realized by binding himself irreversibly (such as giving over rights and coercive power to constituents or their representatives)--imperative crediblity.

Barzel (1992) describes how over centuries rulers and constituents have gradually evolved the rule of law. This evolution can be interrupted or fatally diverted by wars. Barzel's is a strictly neo-classical story--that is institutions play no independent role and the rationality postulate holds. The model in his story is England and only Emgland dirextly fits the story. It is a good story with important implications for our understanding of the evolution of the rule of law and economic growth.

What makes it a good story? It is that a parsimonious theory can render an explanation of what would appear to be a long run fundamental tendency of economies of the western world. England may be unique but the broad pattern of political/economic growth of western societies during the past half millenium is consistent with this tendency. The implication of this model is that time is critical. That is, credible commitment can only be realized over a very long period of time. Time is crucial for the ruler since he/she must have a discount rate that can realize the gains from long term contracting. If the time horizon of the ruler is shortened by fiscal crises (historically a consequence of war) or by the mortality of a ruler unleavened by the utility derived from hereditary succession then confiscation becomes an attractive alternative. Time is crucial for the constituents since uncertainty about the ruler's behavior can only be mitigated by the ruler establishing a reputation and by learning on the part of constituents.

England was geographicaly isolated from the Continent which foreclosed foreign wars on its soil (after the Norman conquest). But how do we account for the Netherlands, which was the original pioneer in the establishment of efficient (low transaction cost) markets (from which the English liberally borrowed)? Like the rest of the Continent it was embroiled in warfare including its long struggle to break free from Spain (1555-1648). And why do some of the western European countries develop while others--including the dominant power of early modern Europe, Spain--stagnate for three centuries? And there is still more to the puzzle: why western Europe; why not China or any number of other contenders who, at least superficially, appeared more advanced than Europe at the dawn of the Middle Ages? And why has the rule of law had such difficulty getting established in Latin America?

The Rationality Postulate

The neo classical story, like so much of our cliometric history constructed on that framework, builds on an implicit set of assumptions that are derived from the rationality postulate of economic theory.

There are no institutions (or if they exist they play no independent role) in the neoclassical world because the instrumental rationality postulate renders them superfluous. Institutions are the humanly devised constraints that structure human interaction and they exist to reduce the ubiquitous uncertainty arising from that interaction. Human beings are--to use Simon's phrase--intendedly rational. But the complexity of the problems to be solved and the limitations of the mental models that humans construct to solve them have produced throughout history a vastly different story than would be human history in a world populated by individuals in possession of the rationality implied by economic theory.

In the world of instrumental rationality institutions are unnecesary, ideas and ideologies don't matter, and efficient markets--both political and economic--characterize economies. In that of intended rationality the actors have incomplete information and limited mental capacity by which to process that information and in consequence develop regularized pattern of rules and norms to structure exchange. There is no implication that the institutions are efficient (in the sense of providing low cost transacting). In such a world ideas and ideologies play a major role in choices and transaction costs result in imperfect markets or no markets at all.

An Institutional/Cognitive Story of Long Run Economic Change

Let's start at the beginning--well almost the beginning. As tribes evolved in different physical environments they developed different languages and, with different experiences, different mental models to explain the world around them. To the extent that experiences were common to different tribes the mental models provided common explanations. The language and mental models formed the informal constraints that defined the institutional framework of the tribe and were passed down intergenerationally as customs, taboos, myths that provided the continuity that we call culture and that forms part of the key to path dependence.

With growing specialization and division of labor the tribes evolved into polities and economies; the diversity of experience and learning produced increasingly different societies and civilizations with very different degrees of success in solving the fundamental economic problems of scarcity. The reason is that as the complexity of the environment increased as human beings became increasingly interdependent, more complex institutional structures were necessary to capture the potential gains from trade. Such evolution requires that the society develop institutions that will permit anonymous, impersonal exchange across time and space. But to the extent that "local experience" has produced diverse institutions and diverse mental models with respect to the gains from such cooperation, the likelihood of creating the necessary institutions to capture the gains from trade of more complex contracting varied.[5]

The story of England specifically and western Europe more generally was actually one in which the institutional structure of feudal northwest Europe and the evolving mental models of the participants combined to produce the unique conditions that led to the particular pattern of development summarized above. Specifically, political competition of the fragmented polities of western Europe forced political entrepreneurs to obtain more revenue to survive; that revenue could be realized by making bargains over property rights with economic organizations and their entrepreneurs. The mental models of the actors (as reflected in the intellectual tradition of Hobbes, Locke, Montesquieu, and the Scottish enlightenment) were equally context specific. The incentive structure not only encouraged the evolution of a legal structure such as the law merchant (Milgrom, North and Weingast, 1990) and the growth of science (David, 1992), but also the development of military technology that led ultimately to European hegemony (North,1981) . The result was the institutional changes leading to the evolution of representative governments and market economies of the

[5]. Heiner (1983) in a pioneering, original essay makes the connection between the complexity of the environment, the mental models of the players and the formation of institutions.

Netherlands, England, and eventually some other economies of Northwest Europe. These conditions were not duplicated in Spain, Africa, China, Latin America, or elsewhere.[6] Let me summarize the implications of the foregoing story in terms of the analytical framework developed in North (1990).

Five Propositions on Institutional Change

1. The continuous interaction between institutions and organizations in the economic setting of scarcity and hence competition is the source of institutional change.

2. Competition forces organizations to continually invest in skills and knowledge to survive. The kinds of skills and knowledge individuals and their organizations acquire will shape evolving perceptions about opportunities and hence choices that will incrementally alter institutions.

3. The institutional framework provides the incentives that dictate the kinds of skills and knowledge perceived to have the maximum pay off.

4. Perceptions are derived from the mental constructs of the players.

5. The economies of scope, complementarities, and network externalities of an institutional matrix make institutional change overwhelmingly incremental and path dependent.

[6]. A brief account of the contrasting paths of Spain and England and the downstream implications for Latin and North America are discussed in North (1990), chapter 11.

The key to the nature of institutional change summarized in the above propositions is the kind of learning and skills that entrepreneurs and their organizations (political and economic) acquire. There is no implication in Proposition 2 of evolutionary progress or economic growth--only of change. The institutional matrix defines the opportunity set, be it one that makes the highest pay-off in an economy income redistribution or one that provides the highest pay-off to productive activities. While every economy provides a mixed set of incentives for both types of activities, the relative weights (as between redistributive and productive incentives) are crucial factors in the performance of economies. The organizations that come into existence will reflect the pay-off structure. More than that, the direction of their investment in skills and knowledge equally reflects the underlying incentive structure. If the highest rate of return in an economy is perceived to come from piracy we can expect the organizations will invest in skills that will make them better pirates. Similarly if high returns are perceived to come from productive activities we will expect organizations to invest in the skills and knowledge that will increase productivity.

The result is a path dependent pattern in which the institutional matrix and the mental models of the players interact to shape incremental change. In the more than 2500 years from Solon to Stalin the incentive structure provided by the institutional framework and the mental models of the actors have guided the choices that have resulted in the enormously diverse patterns of economic change. Most of human economic history is not a story of economic growth but one of stagnation or, at best, very modest economic growth.

A Transaction Cost Approach to Political Markets

Before returning to the central issue of this essay--the relationship between institutions and credible commitment--it is important to elaborate on another aspect of the rationality argument as it relates to credibility: the nature of political markets. I can do this best in a transaction cost framework.

Transaction costs are the costs associated with the meaurement and enforcement of agreements. In economic markets those costs consist of the measurement and enforcement of the physical and property rights dimensions of goods and services and of the performance of agents. While such measurement is frequently costly, the physical dimensions have objective characteristics (size, weight, color, etc.) and the property rights dimensions are defined in standard legal terms. The exchanging parties have an incentive to be informed, competition plays a critical role in inducing enforcement, and the judicial system provides coercive enforcement. Even so, economic markets throughout history, and in the present world, are frequently very imperfect, beset by high transaction costs, and defined by institutions that produce incentives to work against economic efficiency.

Political markets are far more prone to inefficiency. It is extraordinarily difficult to measure what is being exchanged--promises for votes; the voter has little incentive to be informed; and there is no direct enforcement mechanism to see that "contractual agreements" are carried out. The competition comes from periodic elections at which the representative can be held accountable and the opposition candidate has the incentive to promulgate his/her defficiencies.

The institutional framework of the polity of the previous paragraph was a democratic one in which competition does play an important role. For a variety of simple, easy-to-measure and important-to-constituent-well-being policies, something like the rational choice model of the new political economy has explanatory value--for transfer payments for example.[7] But the crucial issues that determine the long run performance of economies and polities are complex, subject to contradictory theories that cannot be resolved with the information available even if the constituent did have the incentive to be informed.

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[7]. Gary Becker (1983) makes a neo-classical argument for political competition which fits the rationality assumptions of the new political economy, but which, I believe. has only limited applicability for the cases described here. For a devastating criticism of efficient political markets see Ann Kreuger's study of the political/economic history of American sugar (1988).

Ideological stereotypes take over and provide the basis for choices in such contexts.[8]

Credible Commitment in Economic History

I now return to the central issue of this essay and explore the way credible commitment has evolved historically. The success story of Western Europe does occur over five hundred years and does appear to be a result of a sequence of incremental changes in economic and political institutions which gradually increased the scope of credible commitments to permit the increasingly complex contracting essential to creating and realizing the potential of more productive technologies. There is still much about this evolution that we do not know, but recent research has documented some important steps along the way (see Milgrom, North, and Weingast,1990; Milgrom, Greif, and Weingast, 1992; and Greif, 1989, for examples).

The early progress was a result of voluntary organizations devising institutional arrangements to solve problems of impersonal exchange over time, first in a specific community but gradually evolving to support such exchange over both time and space. The polity played little or no role in such arrangements. The gradual integration of the law merchant (mercantile law) into a larger legal system was a lengthy process but eventually made possible the

[8]. Anthony Downs (1957) did the pioneering study of ideological stereotypes in the political process. For an elaboration of the arguement here see North "A Transaction Cost Theory of Politics" (North, 1991).

enforcement of contracts over a larger trading area. Was the evolution of such voluntary organizations and the gradual blending of the "voluntaristic" enforcement mechanisms into a legal system unique to western Europe? If it was why was that so?

The crucial watershed in development that was essential to the creation of a capital market and clearly separated the Western European experience from the rest of the world was the shackling of the arbitrary behavior of government with respect to credible commitment over property rights. The triumph of Parliament in 1689 is frequently taken as evidence of the success of the imposition of a set of formal rules to make a polity responsible. Without denigrating the obvious importance of representative government, checks and balances, or a federal system in a polity, I pose the question--are such institutional frameworks a sufficient condition to establish credible commitment?

The questions at the end of each of the past two paragraphs raise some fundamental unresolved issues. Let me briefly explore them in the context of the four distinctive research issues I posed at the beginning of this essay.

1. Formal rules are an important part of the instututional framework but only a part. To work effectively they must be complemented by informal constraints (conventions, norms of behavior) that supplement them and reduce enforcement costs. If the formal rules and informal constraints are inconsistent with each other the

resulting tension is going to induce political instability. But we know very little about how informal norms evolve.

2. Organizations are the primary source of institutional change. Several propositions follow from this assertion: 1) The greater is the competition amongst organizations (whether internal to a given economy or external to it) the greater is the incentive to invest in skills and knowledge to enhance the organization's survival opportunities and hence the greater the rate of institutional change. 2) Since organizations are the agents of change in an economy a change in the bargaining power of existing organizations (as a result of changes in their relative success in accomplishing their objectives) will lead to alterations in the institutional framework. For example, a decline in the perceived effectiveness of existing organizations will weaken their ability to maintain and support the existing institutional structure.

3. Changes in the formal rules (and enforcement) come through the polity (broadly encompassing the judicial as well as the executive and legislative branches). Successful economic growth has been historically linked with the evolution of representative government, and secure property rights with the rule of law; but puzzles abound. Is it possible to model this process in the context of a wealth-maximizing framework or do we have to invoke the mediating influence of informal norms to constrain the behavior of the players at numerous margins? Is the time constraint

described earlier as crucial simply the establishment of reputation or is it the time it takes to develop complementary norms to the evolving formal rules? How do we account for successful growth in some modern economies which neither have evolved representative institutions nor had government corruption and mismanagement strangle economic opportunities? The exceptions in the modern world to the representative polity as a prerequisite to economic growth suggest the high pay-off to be derived from modeling the political process in third world countries.

4. The way the actors perceive the issues that confront a society will shape the policies that they pursue. Surely 70 years of communist policies should persuade economists that ideas matter and that there is no guarantee that the mental models that humans construct to explain the world around them will converge to a common denominator so that there develops the common interpretation implied by rationality models. But there is more to this issue. The interaction between the mental models the members of a society possess and the institiutional structure and consequent organizations is the key to path dependence. It is not only, as I have suggested elsewhere (North, 1990), that the entrepreneurs of the existing organizations have a stake in the existing institutional structure, but it is also that the mental models that have evolved with that institutional structure will be broadly complementary to the existing institutional framework.

Institutional Analysis and Ailing economies

If the foregoing analysis and conjectures have merit they suggest some medicines for ailing economies radically different from those currently being prescribed. I shall conclude this essay by simply enumerating some of the policy implications.

1. Successful restructuring of an economy entails a restucturing both of property rights to provide the "correct" incentives and of the mental models of the players to induce choices that are complementary to such incentives.

2. Restructuring property rights means not only creating the formal rules but creating and implementating a judicial system that will impartially enforce such rules.

3. It takes much longer to evolve norms of behavior than it does to create formal rules and for those economies without a heritage of such norms the reconstruction process is necessarily going to be long and the outcome very uncertain.

4. The objective of restructuring must be the creation of an adaptively efficient economy--that is one that over time will provide an institutional framework for a wide menu of alternative choices for organizational innovation and also wipe out failures. It is one thing to get "the prices right" at a moment of time; it is something else to create an institutional framework that will get them right over time.

5. The key to success is the establishment of a viable polity that will support and enforce such institutional constraints and at this stage of our knowledge we know very little about such an institutional framework. Is it possible to establish a democratic polity in such contexts, or will such a polity fragment and self-destruct in the context of the inevitably painful period of reconstruction? Given the inherently imperfect character of political markets asserted above what sort of polity offers the best chances for the creation of an adaptively efficient economy?