THE NEW INSTITUTIONAL ECONOMICS AND DEVELOPMENT

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In this essay I intend to briefly summarize the essential characteristics of the new institutional economics, to describe how it differs from neo-classical theory, and then to apply its analytical framework (as I see it) to problems of development.

I

The new institutional economics is an attempt to incorporate a theory of institutions into economics.1 However in contrast to the many earlier attempts to overturn or replace neo-classical theory, the new institutional economics builds on, modifies, and extends neo-classical theory to permit it to come to grips and deal with an entire range of issues heretofore beyond its ken. What it retains and builds on is the fundamental assumption of scarcity and hence competition--the basis of the choice theoretic approach that underlies micro-economics. What it abandons is instrumental rationality--the assumption of neo-classical economics that has made it an institution-free theory. Herbert Simon has accurately summarized the implications of this neo-classical assumption, as follows:

> If we accept values as given and constant, if we postulate an objective description of the world as it really is, and if we assume that the decisionmaker's computational powers are unlimited then two important consequences follow. First we do not need to distinguish between the real world and the decisionmaker's perception of it: he or she perceives the world as it really is. Second we can predict the choices that will be made by a rational decisionmaker entirely from our knowledge of the real world and without a knowledge of the decisionmaker's perceptions or modes of calculation (we do, of course, have to know his or her utility function). (Simon, 1986, p. s 210)

In a world of instrumental rationality institutions are unnecessary; ideas and ideologies don't matter; and efficient markets--both economic and political--characterize economies.

In fact, we have incomplete information and limited mental capacity by which to process information. Human beings, in consequence, impose constraints on human interaction in order to structure exchange. There is no implication that the consequent institutions are efficient. In such a world ideas and ideologies play a major role in choices and transaction costs result in imperfect markets.

The place to begin a theory of institutions, therefore, is with a modification of the instrumental rationality assumption. We are still a long way from completely understanding how the mind processes information, but cognitive science has made impressive strides in recent years.

Individuals possess mental models to interpret the world around them. These are in part culturally derived--that is produced by the intergenerational transfer of knowledge, values, and norms which vary radically among different ethnic groups and societies. In

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1. Section I of this essay is drawn from the John R. Commons lecture given at the American Economic Association meetings in January 1992 and subsequently published in the American Economist (Spring 1992, pp 3-6) under the title "Institutions and Economic Theory".

part they are acquired through experience which is "local" to the particular environment and therefore also varies widely with different environments. Consequently there is immense variation in mental models and as a result different perceptions of the world and the way it "works." And even the formal learning that individuals acquire frequently consists of conflicting models by which we interpret the world around us.

Individuals make choices on the basis of their mental models. Individuals do learn, and changes in mental models stem from outcomes inconsistent with expectations; but in Frank Hahn's words "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) In consequence there is not one determinate equilibrium which will obtain; but multiple equilibria can occur.

The incomplete information and limited mental capacity by which to process information determines the cost of transacting which underlies the formation of institutions. At issue is not only the rationality postulate but the specific characteristics of transacting that prevent the actors from achieving the joint maximization result of the zero transaction cost model. The costs of transacting arise because information is costly and asymetrically held by the parties to exhange. The costs of measuring the multiple valuable dimensions of the goods or services exchanged or of the performance of agents, and the costs of enforcing agreements determine transaction costs. 2

Institutions are formed to reduce uncertainty in human exchange. Together with the technology employed they determine the costs of transacting (and producing). It was Ronald Coase (1937 and 1960) who made the crucial connection between institutions, transaction costs and neo-classical theory; a connection which even now has not been completely understood by the economics profession. Let me state it baldly. The neo-classical result of efficient markets only obtains when it is costless to transact. When it is costly to transact, institutions matter. And because a large part of our national income is devoted to transacting, institutions and specifically property rights are crucial determinants of the efficiency of markets.3 Coase was (and still is) concerned with the firm and resource allocation in the modern market economy; but his insight is the key to unraveling the tangled skein of the performance of economies over time, which is my primary concern.

How does this new institutional approach fit in with neo-classical theory? It begins with the scarcity hence competition postulate; it views economics as a theory of choice subject to constraints; it employs price theory as an essential part of the analysis of institutions; and it sees changes in relative prices as a major force inducing change in institutions.

How does this approach modify or extend neo-classical theory? In addition to modifying the rationality postulate, it adds institutions as a critical constraint and analyzes the role of transaction costs as the connection between institutions and costs of production. It extends economic theory by incorporating ideas and ideologies into the analysis, modeling the political process as a critical factor in the performance of economies, as the source of the diverse performance of economies, and as the explanation for "inefficient" markets.

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2. The transaction cost approach is unified only in its agreement on the importance of transaction costs. The approach developed here might most appropriately be termed the University of Washington approach. Oliver Williamson has pioneered a somewhat different approach.

3. Wallis and North, "Measuring the Transaction Sector in the American Economy, 1870-1970" in Engerman and Gallman, 1986 found that 45% of national income was devoted to transacting in 1970.

I will expand on this last point--inefficient markets--because it highlights the major contribution that the new institutional economics can make to economics, economic history, and economic development. Coase began his 1960 essay by arguing that when it is costless to transact, the efficient neo-classical competitive solution obtains. It does so because the competitive structure of efficient markets leads the parties to arrive costlessly at the solution that maximizes aggregate income regardless of the institutional arrangements. Now to the extent that these conditions are mimicked in the real world, they are mimicked because competition is strong enough via arbitrage and efficient information feedback to approximate the Coase zero transaction cost conditions and the parties can realize the gains from trade inherent in the neo-classical argument.

But the informational and institutional requirements necessary to achieve that result are stringent. Players must not only have objectives but know the correct way to achieve them. But how do the players know the correct way to achieve their objectives? The instrumental rationality answer is that even though the actors may initially have diverse and erroneous models, the informational feedback process and arbitraging actors will correct initially incorrect models, punish deviant behavior, and lead surviving players to the correct models.

An even more stringent implicit requirement of the discipline-of-the-competitive-market model is that when there are significant transaction costs, the consequent institutions of the market will be designed to induce the actors to acquire the essential information that will lead them to correct models. The implication is not only that institutions are designed to achieve efficient outcomes but that they can be ignored in economic analysis because they play no independent role in economic performance.

But these are stringent requirements that are realized only very exceptionally. Individuals typically act on incomplete information and with subjectively derived models that are frequently erroneous; the information feedback is typically insufficient to correct these subjective models. Institutions are not necessarily or even usually created to be socially efficient; rather they, or at least the formal rules, are created to serve the interests of those with the bargaining power to create new rules. In a zero transaction cost world, bargaining strength does not affect the efficiency of outcomes; but in a world of positive transaction costs it does--and it thus shapes the direction of long run economic change.

It is exceptional to find economic markets that approximate the conditions necessary for efficiency. It is impossible to find political markets that do.4 Because it is the polity that defines and enforces property rights, it is not surprising that efficient economic markets are exceptional. Moreover once an economy is on an "inefficient" path that produces stagnation it can persist (and historically has persisted) because of the nature of path dependence.

Institutional path dependence exists because of the network externalities, economies of scope, and complementarities that exist with a given institutional matrix. In everyday language the individuals and organizations with bargaining power as a result of the institutional framework have a crucial stake in perpetuating the system. Paths do get reversed (witness Argentina--from growth to stagnation in the past half century; or Spain--the reverse since the 1950s). But reversal is a difficult process about which we know all too little--as witness the ongoing fumbling efforts at such reversal in central and eastern Europe. The reason is that we still know all too little about the dynamics of institutional change and particularly the interplay between economic and political markets. But let's see how far this analytical framework will take us.

II

An institutional/cognitive story of long run economic change begins by examining the changing initial conditions confronting diverse growups of individuals. As tribes evolved in different physical environments they developed different languages and, with

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4. See the author's "A Transaction Cost Theory of Politics", Journal of Theoretical Politics, Fall 1990

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 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 experiences and learning produced increasingly different societies and civilizations with very different degrees of success in solving the fundamental economic problems of scarcity. The reason for differing success is straightforward. The complexity of the environment increased as human beings became increasingly interdependent, and more complex institutional structures were necessary to capture the potential gains from trade. Such evolution required that the society develop institutions that will permit anonymous, impersonal exchange across time and space. But to the extent that "local experience" had produced diverse mental models and institutions 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 key to this story is the kind of learning that organizations acquired to survive. If the institutional framework made the highest pay-offs for organizations piracy, then organizational success and survival dictated that learning would take the form of being better pirates. If on the other hand productivity raising activities had the highest pay-off then the economy would grow.

There is no guarantee that the perceived pay-offs will favor the latter rather than the former and indeed economic history bears abundant testimony to economic growth being the exception. The long evolution of the western world from the relative backwardness of the tenth century to its growth, preeminence, and hegemony by the eighteenth century is striking not only because of the relative failures in the rest of the world (China and Islam for example) but equally for the diverse degrees of success in the west itself.6 What went wrong with the failures and more urgently why is it so hard to make it right? An explanation entails some analysis of the institutional requirements necessary to capture the productivity implications of modern technology.

The second economic revolution which began in the second half of the nineteenth century was the systematic application of the modern scientific disciplines to technology and more broadly to the economic problems of scarcity.7 For those economies that could realize their potential the productivity implications have resulted in standards of well-being simply unimagined by prior generations. But to realize the advantages of this technology has entailed a fundamental restructuring of economic activity and more than that of the entire society. The economic restructuring involves realizing the productive implications of world-wide specialization and division of labor. While Chandler(1977) has captured some of the key elements of this transformation for individual firms, the overall costs of coordinating and integrating economies--transaction costs--entail economy-wide restructuring including the development of a polity that will enact and enforce the rules of the game necessary to such integration.

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5. Ronald Heiner (1983) in a pathbreaking article first articulated the connection between uncertainty and institutions and suggested that institutional development could be arrested using an argument similar to that advanced here.

6. See Jones (1981 and 1988), Rosenberg and Birdzell, (1986) and North and Thomas (1973) for explanations of this evolution.

7. See North (1981) chapter 13, "The Second Economic Revolution" for an elaboration of this argument.

Why is such a polity so difficult to accomplish? A simple parable derived from game theory highlights the dilemma. Cooperative solutions in game theory are most likely when the play is repeated, when the players have complete information about the other players' past performance, and when there are small numbers of players. Let me turn that story around; cooperation is difficult to achieve when the play is not repeated or there is an endgame, when the players do not possess information about the other players, and when there are large numbers of players. In those circumstances the gains from defection typically outweigh the gains from cooperation.

The second economic revolution created an economic world characterized by impersonal markets and all the attendant characteristics of the latter game theoretic conditions. To overcome them entails the creation of institutions that so structure the rules and their enforcement as to alter the pay-offs to induce cooperative solutions. This analysis is hardly new (although the terminology may be different). Karl Marx long ago pointed out that the tension between the organizational imperatives of a technology and the existing property rights was a fundamental source of conflict and change. Marx's error was that he thought that it was capitalism that was incompatible with the new technology. In fact it has been the flexibility of the political and economic institutions of the market economies that has enabled them to adjust to realize the productivity implications of the second economic revolution. And, ironically, it has been the inflexibility and rigidities of centrally planned economies that have led to their demise.

But there is still more to the issue of institutional adjustment to the second economic revolution. That adjustment entails a total societal transformation. Impersonal exchange, minute specialization and division of labor, a radical reduction in information costs, and world wide interdependence entail a complete transformation of every aspect of societal organization. Urbanization, ubiquitous externalities, the insecurity arising from interdependence, and radical alteration of the traditional functions of the most fundamental organization of all prior societies--the family--have produced and continue to produce immense modern social problems. Again it has been the flexibility of the political and economic institutions of western economies that have, very imperfectly, provided substitutes for the traditional role of the family; insured against the new insecurities affecting individuals; and dealt with the externalities, environmental as well as social, that accompany this economic transformation.

III

It is precisely in this economic and social context that the modern problems of economic development must be considered. The fundamental issue can be stated succinctly. Successful development policy entails an understanding of the dynamics of economic change if the policies pursued are to have the desired consequences. And a dynamic model of economic change entails as an integral part of that model analysis of the polity since it is the polity that specifies and enforces the formal rules.

We are still some distance from having such a model but the structure that is evolving in the new institutional economics, even though incomplete, suggests radically different development policies than those of either traditional development economists or orthodox neo-classical economists. Development economists have typically treated the state as either exogenous or as a benign actor in the development process. Neo-classical economists have implicitly assumed that institutions (economic as well as political) don't matter and that the static analysis embodied in allocative-efficiency models should be the guide to policy; that is "getting the prices right" by eliminating exchange and price controls. In fact the state can never be treated as an exogenous actor in development policy and getting the prices right only has the desired consequences when you already have in place a set of property rights and enforcement that will then produce the competitive market conditions.

Before going further it is essential to distinguish clearly institutions from organizations. Institutions are the rules of the game of a society or more formally are the humanly-devised constraints that structure human interaction. They are composed of

formal rules (statute law, common law, regulations), informal constraints (conventions, norms of behavior, and self imposed codes of conduct), and the enforcement characteristics of both.

Organizations are the players: groups of individuals bound by a common purpose to achieve objectives. They include political bodies (political parties, the senate, a city council, a regulatory agency); economic bodies (firms, trade unions, family farms, cooperatives); social bodies (churches, clubs, athletic associations); and educational bodies (schools, colleges, vocational training centers). These definitions undergird five propositions that define the essential characteristics of institutional change:

1. The continuous interaction of institutions and organizations in the economic setting of scarcity and hence competition is the key to 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 dictates 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.

Let me elaborate on these propositions. Economic change is a ubiquitous, ongoing, incremental process that is a consequence of the choices individuals and entrepreneurs of organizations are making every day. While the vast majority of these decisions are routine (Nelson and Winter, 1982) some involve altering existing "contracts" between individuals and organizations. Sometimes that recontracting can be accomplished within the existing structure of property rights and political rules; but sometimes new contracting forms require an alteration in the rules. Usually existing informal norms of behavior will guide exchanges, but sometime such norms will gradually be modified or wither away. In both instances institutions are gradually being modified. Modifications occur because individuals perceive that they could do better by restructuring exchanges (political or economic). The source of the changed perceptions may be exogenous to the economy--for instance a change in the price or quality of a competitive product in another economy that alters the perceptions of entrepreneurs in the given economy about profitable opportunities. But the fundamental source of change is learning by entrepreneurs of organizations.

While some learning is a result of idle curiosity, the rate of learning will reflect the intensity of competition amongst organizations. Competition is a ubiquitous consequence of scarcity and hence organizations in an economy will engage in learning to survive. But the degree can and does vary. If competition is muted as a result of monopoly power the incentive to learn will be reduced.

The rate of learning determines the speed of economic change, the kind of learning determines the direction of economic change. The kind of learning is a function of the expected pay-offs of different kinds of knowledge and therefore will reflect the mental models of the players and most immediately at the margin, the incentive structure embodied in the institutional matrix. As noted earlier if the institutional matrix rewards piracy (or more generally redistributive activities) more than productive activity then learning will take the form of learning to be better pirates.

Change is typically incremental, reflecting ongoing ubiquitous evolving perceptions of the entrepreneurs of organizations in the context of an institutional matrix that is characterized by network externalities, complementarities and economies of scope among the existing organizations. Moreover since the organizations owe their existence to the institutional matrix, they will be an ongoing interest group to assure the perpetuation of that institutional structure-- thus assuring path dependence. Revolutions do occur,

however, when organizations with different interests emerge (typically as a result of dissatisfaction with the performance of existing organizations) and the fundamental conflict between organizations over institutional change cannot be mediated within the existing institutional framework.

IV

It is one thing to describe the characteristics of economic change; it is something else to prescribe the correct medicine to improve the performance of economies. We simply don't know how to transform ailing economies into successful ones but some fundamental characteristics of institutions suggest some clues.

1. Institutions are made up of formal rules, informal norms and the enforcement characteristics of both and it is the admixture of rules, norms, and enforcement characteristics that determines economic performance. While the formal rules can be changed overnight, the informal norms change only gradually. Since it is the norms that provide the essential "legitimacy" to any set of formal rules, revolutionary change is never as revolutionary as its supporters desire and performance will be different than anticipated. More than that societies that adopt the formal rules of another society (such as Latin American countries' adoption of constitutions like that of the United States) will have very different performance characteristics than the original country because both the informal norms and the enforcement characteristics will be different. The implication is that transferring the formal political and economic rules of successful western market economies to third world and eastern European economies is not a sufficient condition for good economic performance. Privatization is not a panacea for solving poor economic performance.

2. It is polities that shape economic performance because they define and enforce the economic rules of the game. Therefore the heart of development policy must be the creation of polities that will create and enforce efficient property rights. Unfortunately, however, research in the new political economy (the new institutional economics applied to polities) has been largely focused on the United States and other developed countries. While we know a lot about the characteristics of the polities of third world countries we have very little theory about such polities.8 We know even less about the consequences of radically altering the institutional framework of central and eastern European societies. However, the characteristics of institutions described in the foregoing sections of this paper suggest some implications:

a. Political institutions will be stable only if they are supported by organizations with an interest in their perpetuation. Therefore an essential part of political/economic reform is the creation of such organizations.

b. It is essential to change both the institutions and the belief systems for successful reform since it is the mental models of the actors that will shape choices.

c. Evolving norms of behavior that will support and legitimize new rules is a lengthy process and in the absence of such reinforcing norms polities will tend to be unstable.

d. While economic growth can occur in the short run with autocratic regimes, long run economic growth entails the development of the rule of law and the protection of civil and political freedoms.

e. Informal constraints--norms of behavior, conventions, and codes of conduct--are a necessary (but not sufficient) condition for good economic performance. Societies with norms favorable to economic growth can sometimes prosper even with unstable or adverse political rules. The key is the degree to which there is enforcement of the adverse political

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8. Interest in modeling the polities of third world economies is still in its infancy. Robert Bates (1981, 1983, and 1989) has been a pioneer in applying the new political economy to African economies.

rules. We know very little about the evolution of belief systems and consequent informal constraints although religions have clearly been a basic component of belief systems.

3. It is adaptive rather than allocative efficiency which should be the guide to policy. Allocative efficiency is a static concept with a given set of institutions; the key to continuing good economic performance is a flexible institutional matrix that will adjust in the context of evolving technological and demographic changes as well as shocks to the system. It is the creation of a stable polity with complementary norms that is the essential characteristic. Successful political/economic systems have evolved such characteristics over long periods of time. We know very little about how to create such systems in the short run or indeed, whether it is even possible to create them in short periods of time. However it is doubtful if the policies that will produce allocative efficiency are always the proper medicine for ailing economies. Efficient policies that are perceived to be inequitable will engender political reactions which can stall or reverse effective reforms.

There is no greater challenge facing today's social scientist than the development of a dynamic theory of social change that will fill in many of the gaps in the foregoing analysis and give us an understanding of adaptive efficiency.