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THE ROLE OF INSTITUTIONS IN ECONOMIC DEVELOPMENT

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I am going to talk to you about institutions and economic development and I am going to be concerned with two issues. One of them is what makes dysfunctional economies or economies that do not work well and the second is what can we do about it. Now that is a neat job to do in an hour. So I will be giving you a very quick and superficial covering of many and very complex subjects.

I begin with the theory we use to understand the problems. Neoclassical economics was never intended to deal with the issues of economic development. It evolved in the late nineteenth century and its objective was to explain efficient resource allocation in developed economies. It had two gigantic failures as far as our subject matter here is concerned. One, it was frictionless; two, it was timeless, static rather than dynamic in terms of its issues. I am going to talk first about how to deal with frictions; next I shall explore the behavioral assumption that underlies neoclassical theory. Then we can turn to the role of time and then be ready to lay out the problems of development and, in the time remaining, see what we can do about them.

It is fitting that I should be giving this lecture in honour of Gunnar Myrdal. Institutional economics has been around a long time. In America, we have Thorsten Veblen, John R. Commons and a long heritage of institutionalists; and Gunnar Myrdal was a pioneer here in Europe. The problem with institutional economics, and the reason it faded from sight, was that it did not explicitly address the issues we had to solve. What we have to do is understand what makes economies work the way they do – that is a necessary precondition to being able to say something about how we can make them work better. Obviously the place to begin is with what institutions are, how they work, and why they work the way they do; then we are going to look at some fundamentals that lie underneath the surface. Some of you who know the new institutional economics literature will find I am repeating things, at least for a while, that you are familiar with. I hope you forgive me because I want to be sure that everybody is (so to speak) up to speed in dealing with the issues that I am going to be concerned with.

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Institutions would not exist in a frictionless world where there is no uncertainty. Institutions exist to reduce uncertainty in the world. In a world without institutions we would not know how to deal with each other. Institutions are the incentive systems that structure human interaction. They can make predictable our dealings with each other every day in all kinds of forms and shapes. They thereby not only reduce uncertainty in the world but allow us to get on with everyday business and solve problems effectively. When we say institutions structure human interactions what we mean is that they provide incentives and disincentives for people to behave in certain ways; and if they are effective they structure and provide incentives and also structure economic, political and social activity. One cannot make sense out of the world with just economic reasoning. You have to know political and social theory and, as you are going to see, you must also know some cognitive science. Now, the reason why of course you need all these is that we do not live only in an economic world, a political world or a social world; we live in a world that is a blended mixture of all these. In the world that we are trying to confront with respect to solving problems, we have to develop a body of theory that integrates all of them. That is what institutional theory should be doing. It should not only integrate various disciplines, but, and here I will pay tribute to neoclassical economics, it also wants to integrate the analysis with those parts of neoclassical economic theory that are useful and helpful in

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solving problems – particularly, of course, micro-theory or price theory. Micro-theory or price theory is a perfect complement to a lot of the things that we want to be able to understand and I will be talking about it as we go along.

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Institutions are made up of formal rules, informal constraints and their enforcement characteristics. Formal rules, of course, are very straightforward. They are rules put into place; they are laws, constitutions, regulations, whatever, that have the character of being specific and being defined precisely. Informal norms of behaviour provide us with more problems because informal constraints do not show up in formal terms. They are ways of doing things and are terribly important. The kinds of formal rules that we have in fact occupy a very small proportion of the guides to everyday behaviour and actions. In many ways norms are more important than the formal rules.

So there are the formal rules and informal norms; and then there are the enforcement characteristics of both of those. This is important. Some institutionalists have enforcement as part of the formal rules and informal norms; indeed, if you do game theoretical models – one of the favourite indoor games of a lot of people – you incorporate enforcement within the formal rules. But that is a mistake because you want to be able to ask yourself how effective enforcement is – enforcement not only of the formal rules but also of the informal norms of behaviour.

Let me give you an illustration that shows the role of institutions in their entirety in shaping performance, but instead of economic performance I am going to talk about performance in professional sports. The way the game is played is a function of the formal rules that define what the players can and cannot do and of informal norms of behaviour that are supposed to prevent you from trying to kill the quarterback on the opposing football team or from similar unsportsman-like behaviour. And then there are the referees and umpires, who are supposed to see that people live up to both the formal rules and the informal norms. Now I do not know about here in Europe but I do know that in the United States very frequently it pays to play dirty, to try to injure the quarterback on the opposing team if he is a good quarterback; or otherwise do in the players on the other side, intimidate them and things like that. It makes a very different game, depending on whether you play the game according to the rules and people live up to the standards, formal or informal; or you try to evade them and to get away with it. Societies are like that. They are structured and made up of a complex of formal rules, informal norms and their enforcement characteristics. It is very important to understand something that is obvious but needs emphasis, and that is that enforcement is never perfect. It never pays for it to be perfect because at the margin an incremental resource devoted to enforcement at some point is not worthwhile in terms of the increased enforcement obtained. So you have some trade-off at the margin between imperfect enforcement and behaviour. I do not have to tell you that this is true in professional sports; it also is true in everyday life. We have imperfect enforcement of rules, laws and norms all the time, but the degree of imperfection, as you are going to see, plays a big part in some of the things that we are going to deal with.

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I want now to turn this discussion to neoclassical economics. Economics is a theory of choice. But how do we make choices? Economists say we use the rationality assumption. That is saying absolutely nothing. The rationality assumption at its best says that people are consistent and logical maybe, but it does not say how people make choices in the face of enormously complex information, imperfect knowledge and imperfect feedback on the consequences of their actions. The physical sciences have fundamental underlying structures, and if you understand the fundamental underlying structure, you can theorize effectively about problems – in chemistry, those dealing with elements; in physics, protons or neutrons. To solve a new problem, you go back to the fundamental element and build on that developed theory to explain problems. We do not have any fundamental elements in economics or in political science or in sociology. And so we have a very difficult problem: how do we, therefore, arrive at understanding what we are doing? What is the basic building block that we have? Economics assumes that we have perfect information so we know all the alternative choices,

and that given all the alternative choices we make a calculus of benefits and costs and arrive at a decision as to what to do. We do not do any such thing. What we do is evolve and make choices on the face of very incomplete and imperfect information usually with imperfect feedback on the actions that have been undertaken. Understanding how people make choices in the world requires that we say something much more fundamental and delve into something much more complicated than what we have done so far.

That takes us into cognitive science. It takes us into how the mind and the brain work, how they interpret the evidence that is before us, evidence that comes in terms of what our senses – sight, hearing, smell – receive and from which we build up models of the world. Now I am going to say something that is crucial to my whole argument and is crucial in undermining most of economics. All the building blocks of the world we live in are a product of our human mind. They do not exist outside us. Such is not the case in physics and chemistry or biology or genetics; there you can go back to some fundamental elements by reduction and then build up your analysis. If I talk about a piece of wood, it is there, I can feel it, I can touch it, I can see it. But again, all the things that we have constructed to explain the human condition are things that are constructed in our minds and, therefore, do not exist independent of minds. This means that we must come to grips with something so complicated that it requires that we think all over again about the way in which we understand the world around us. Now, I am only going to delve very lightly into consciousness because it is an immense subject and one that my friends in the cognitive science field say it may be crazy to raise, it is so complicated.

Consciousness is fundamental to understanding not only why humans are different from animals. Consciousness is awareness, is self-awareness about time and space. It is self-awareness about where you fit into a very complex web of things. Cognitive science has produced thousands of books about consciousness, and none of them has ever really explained it. It is perhaps, next to the origins of the universe, the greatest mystery in the universe. Consciousness is self-awareness and while cognitive science has done very complex studies of how biology and chemistry in our brains make us aware, they do not tell us how or why the brain works. Consciousness not only is the source of creativity, imagination, of all the wonders of civilization, art, literature, music and all those wonderful things that we produce; it also is the source of fanaticism and terrorism and a lot of the things that make the world something less than an ideal place. When we turn around and ask ourselves, as we are going to do in a few minutes, what makes societies work the way they do, or not work, we cannot escape being concerned about how the human mind in different cultural settings arrives at explaining the world and, therefore, making choices. I am back to the theory of choice.

Before I turn to time let me concentrate a little on frictions. The economic institutions we have that shape directly our world derive from political institutions. Economists do not like to think that they are dependant on political science but they are. As well as recognizing the formal rules like constitutions, laws, rules and regulations, we are interested in who makes the rules and for whom. So a fundamental underlying issue is to see how we have structured the rules of the game with respect to whose choices matter, how choices get aggregated, and how in turn that produces the way in which a polity makes the rules that in turn shape the economy. The polity makes and puts in place the economic rules of the game. These essentially concern property rights: not only property rights in terms of rules about how property is used, alienated and owned, but also property rights in terms of the effectiveness of enforcing contracts and agreements in laws. What we have, therefore, is a structure that humans have evolved – remember it is still all in our heads – a political structure that in turn puts in place an economic structure that shapes how that society works. So much for the frictions part of the game.

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Now let me talk about time in history. And let me take you back for a millennium or two; I am an economic historian you may remember. What has happened is that uncertainty about the physical environment, which dominated how we structured the game, has lessened over the last five or six hundred years as humans have evolved institutions to control the physical environment – not

completely of course, as we still have problems like global warming. But our world is no longer dominated by climate, by uncertainties associated with earthquakes and animals killing us or eating us; it is dominated by concern about things that are a product of our creation. You can see the proof of this in the increase over the last few hundred years of life expectancy. It has more than doubled. On average, people of your great great grandparents' generation lived to be maybe 40 at most. Today, the average is somewhere between 70 and 80 for women, slightly more than for men. And you are healthier throughout your whole life than they were.

That is an immense achievement. Equally importantly, through the development of science and its application to solving problems of scarcity, we make possible enormous increases in the control of nature such that productivity in agriculture and in all the other dimensions of economic activity has just grown astronomically. So we have changed the world; essentially we have conquered the physical environment. We have made possible a world of plenty. We have enormous piles of statistics to tell us that we have done so.

But in conquering the physical environment we have created a human environment that is immensely complicated and over which we have very imperfect understanding. And so, on the one hand, we have made possible a world of plenty, and a world in which human beings live more than twice as long as they did before, and have the possibility of well-being on a level that would be beyond the comprehension of our ancestors. But we have also created a whole new set of problems in a human, political, economic and social structure that we are only able to use very imperfectly to solve and maintain what we are concerned with.

What we are concerned with is the cultural heritage of humans. By that I mean something very specific; I mean a set of institutions and beliefs that has been carried forward over the generations that constitutes the basic way we perceive the world. We have a very limited ability to change it; it is path dependent in the sense that the inheritance we have of rules, norms, beliefs – those that have survived – is deeply embedded. Sometimes the embeddedness is deeper than at other times but it poses a genuine problem because that cultural heritage produces a mix of good and bad that shapes the way in which we make choices and the ways in which societies and institutions evolve.

So what we have to do in the very short time I have here, is to try to talk about the implications of this structure for the very rich institutional heritage of political, economic and social rules of the game combined with a belief system that has evolved and that together have shaped the way we see the world. We may see the world in terms of developed countries like ours, which means that we see the world with one perspective; or from the perspective of a sub-Saharan African country or a Muslim country or others. The cultural heritage and the belief system of each produce results with respect to the way in which problems are approached in the world. Let us turn and look at what that implies.

Our cultural heritage is a historical function of a twofold phenomenon. We start with a set of beliefs that we have derived from the past, and then we get new experiences that modify that belief system over time. Both the heritage itself and the experiences are shaping the way we understand the world around us. How do we arrive at the set of culturally derived values and norms that we have – where do they come from? Now, if you believe Weber, they come out of religion and they gave rise to capitalism. Weber had it partly right. What he said was important because at least it got us to escape from the economist's view that beliefs do not matter. I am going to argue that beliefs are everything in the world. Where they come from and how they evolve is the key really to understanding the human condition and how in turn it is evolving over time. Beliefs generally are derived from the historical experiences of human beings in different physical settings. The economist Jean Philippe Platteau has spent a lot of time studying the way in which beliefs systems in Africa evolved.¹ Essentially he has a view, which is controversial, that redistributive norms that existed in African societies were a function of an environment in which there were very few people, vast areas of land and a great deal of uncertainty with respect to climate and physical aspects of the environment. Therefore, the degree to which your output was the result of your own effort or the result of good luck was an open question. Now in a world like that, according to Platteau, human beings in a family or clan environment would feel that much success was good luck and that whether you worked hard or you did not work was not

necessarily consistent with how well you did. The result was redistributive norms, norms in which the lucky people would share their good luck with people who were less fortunate.

There is a lot of work being done on norms. A group at the Santa Fe Institute are undertaking a set of studies of what kind of background settings have produced different kinds of cultural norms.² The norms are important because they underpin the way in which people make choices. There are a number of factors that are shaping how people make choices. In addition to the cultural heritage and the kind of experiences that they have had, there are political systems. When economics moved into politics to create the so-called public choice theory, it carried over the principles of economics and applied them to politics. That carried a certain amount of mileage, but also got economics into trouble. The economic rules of the game were put in place by politics; politicians are never disinterested, and they are always concerned with certain kinds of objectives. However, we do not know how to create politics that work. We have a lot of practice in a lot of countries around the world trying to restructure politics, but we have very, very limited ability to do so. We say that economies work well when we have a set of market structures in which competition plays the crucial part of forcing the players to compete by price and quality rather than compete at other margins like killing each other. Competition plays that crucial role, but we have nothing like it in politics. We do attempt to confront that issue; and, indeed, James Madison, who played a key part in writing the United States Constitution, had a system of checks and balances designed to try to structure the political game, so that it worked somewhat as the economic game does.

Let me summarize the foregoing discussion to focus specifically on issues of development. As we evolved over time, the first thing that constrained our abilities to make choices and, therefore, shaped what happens to us, was the path dependent patterns in our heritage – the aggregation of beliefs and institutions that evolved over time and survived. The cultural heritage is a mixture of beliefs inherited from the past filtered by new experiences including our schooling, family background, and so on that modified that belief system. The experiences are both positive and negative in the sense that they are not only experiences that may shape us and make us have a better comprehension of what is going on, but also experiences that may make us frustrated and indeed lead to policies producing fanaticism and terrorism. When we ask ourselves, therefore, how we are evolving, we have these things happening at the same time: we have path dependence, and we have new experiences that are both positive and negative. We also have lower information costs that are making us much more aware about alternatives around the world and, therefore, greatly increasing our ability to see different kinds of experience and different success stories. We have fundamentally increased knowledge about the sources of productivity and we have increasing knowledge about what makes politics work.

When we put those things together, we have forces operating in conflicting ways. On the one hand, bad performance arises from institutions that are inherited from the past and constrain our behaviour, or from a polity that does not work well and has in place people with a vested interest in perpetuating inefficient rules of the game; and, on the other, are much lower costs of information, and a much improved understanding of what makes economies work. This setting leads us to something that Adam Smith understood a long time ago and takes us to some of the key problems that directly are involved in the world we live in today.

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Adam Smith said that the wealth of nations was a function of the size of the market. And the size of the market was a function of specialization and the division of labour. Nothing the matter with that; it is perfectly true, but what neither Adam Smith saw nor indeed modern economies see are three fundamental dilemmas. The first is the movement from personal to impersonal exchange. If you are going to realize Adam Smith's world of "size of the market shaping the wealth of nations" you have to move from a world of personal exchange to a world of impersonal exchange. Doing so is not easy. Personal exchange means that you have repeat dealings with other people, you know them, you know their background; and it pays for you to live up to your word, cooperate, and so on. A world of impersonal exchange is just the reverse; it is a world in which you do not know the other players, in which you will never see them again, in which you may have seen them only once, and you have large

numbers of participants. Now if I put this in a game-theoretic context, it is very simple: a world of personal exchange is a world in which it pays to cooperate, because if you do not cooperate the other party is going to punish you for it; impersonal exchange is just the reverse: it pays to defect or to take the money and run, to not live up to the standards, to not live up to the agreements or contracts. Of all the fundamental transitions that human beings have had to make, the shift from personal to impersonal exchange has been one of the most fundamental and is one that is still at the very heart of the failure of poor societies to develop. We can summarize very simply what the issue is; if you are going to move to a world of impersonal exchange, you have to change the institutional framework so that it pays to cooperate. That means developing institutions that either through reputation mechanisms or through some other devices can see to it that the players will cooperate with each other and that they will punish those that do not. So far so good, that is easy. But here you get into a really tough problem, and that is that as the market gets bigger, reputation mechanisms do not work very well because the market gets too big and if you cheat somebody in one market, you can go to another market. In order to have low costs enforcement of contracts in impersonal exchange, you have to have third party enforcement. And third party enforcement ultimately means the polity or the state. You have to create a political system that will put in place rules and laws and enforce them at low cost, that make it possible to have successful impersonal exchange on a worldwide basis. We do not know how to do that. If you have a society which has personal exchange and you try to move to impersonal exchange you cannot overnight create a judicial system that puts in place and enforces rules and contracts and so on. You are stuck with something that is very imperfect and usually works very poorly.

That is one dilemma. There is another, much less well known; I recommend it to your attention because it is becoming a bigger and bigger issue. When Adam Smith said that productivity growth comes from specialization and the division of labour, he did not say it quite right. What happens in the world of specialization and division of labour is specialization of knowledge. Specialization of labor is not just the fact that in a pin factory you get the task done more precisely and then machines replace the human hand. That is trivial; the real gain is that you become highly specialized in terms of knowledge. And that is what we have done. We have increased enormously the amount of human capital investment. Human capital investment means that we have people specialized in one particular thing, and that is all they do if they are not a jack-of-all-trades all of the time. Your ancestors would have lived on a farm, would have built their own house, grown their own food, made their own clothing. We do not do all that anymore, at least not if we want to be a rich society. Rather, we become economists or something more useful perhaps; and we rely on somebody else to provide us with food and clothing and housing. It sounds simple and easy; it is not, because when you get specialization of knowledge, how do you integrate that knowledge? Gunnar Myrdal's co-winner of the Nobel Prize, Friedrich von Hayek, said a price system would do it. The price system does part of it, but it does not do it all. And indeed what you have is a world in which you must integrate at low cost specialized knowledge by building connections. You have to make those connections, and that requires institutions and organizations that deliberately lower the transaction costs of integrating knowledge in a society. Now if you do not believe me, let me try a little experiment.

As a good economist you know that relative scarcity dictates prices, so if you are a physicist or a chemist and you go to Bangladesh, for example, you should command an astronomical price. In reality, if you are a good chemist you do much better staying in the United States, in Switzerland or in Germany than you would in Bangladesh. What is the matter with economics? Nothing is the matter with economics except that it forgot that you are only valuable to the degree that it is possible to integrate your knowledge with that of a half a thousand other kinds of people. In the developed countries we have evolved all different kinds of specializations on various dimensions that make this possible. There is a growing area of research in sociology, which is network analysis. In network analysis we are beginning to see the interconnected webs that exist in society in order to realize the potential of modern integrated knowledge. Integrated knowledge is complex and involves people in a variety of different disciplines, in a variety of different settings, and in a variety of different organizational forms. In the Silicon Valley in California, almost every kind of skill is available at low cost and people meet each other all the time. But supposing you are a third world country and are trying to compete with already developed countries. You face a big disadvantage. It is not a level

playing field; it is not easy if you are a third world country to be able to catch up with the first world, not because of the simple thing of relative prices, but because you have to bridge knowledge of all kinds and integrate them in order for them to be worthwhile and to be valuable. My second dilemma, therefore, is that if you are going to get the advantage of specialization and division of labour, an effective price system gets you part way, but beyond that, then you need to develop a variety of organizations and institutions that will bridge at low cost, and integrate at low cost, the knowledge you need to take advantage of this world of specialization and division of labour. In straightforward economics we do not deal with it very much. Nor have sociologists working on network analysis developed a theory that explains how to put it all together.

There is finally a third dilemma, equally a Smithian problem. It concerns efficient markets. What do we mean by efficient markets? There is no such thing as laissez-faire in the world. Any market that works well, whether it is a product market or a factor market, does so because it is structured in such a way that the players compete at those margins, and those margins alone, that ensure that people pursuing their self-interest also improve the well-being of society. Almost any market that is structured that way is going to have a mixture of property rights and formal rules underlying it. Additionally, it will have constraints that are usually rules and regulations that go beyond the very general rules and that specify particular margins of particular kinds of economic activity. That will make it so that the players compete. The informal norms are important. When we measure transaction costs in different settings, we find that when people live up to contracts and agreements, the costs are lower than they are when they do not.

The conditions differ between factor and product markets, but they also vary over time in the same factor and product markets. So even if a market is working well in time t , it may work well in time $t+1$ only if its structure is modified to take into account changing information costs, changing technology, and so on. In a recent study of telecommunications around the world, the World Bank looked at how that market had to be structured over time. Telecommunications was interesting for the obvious reason that at one time it was a natural monopoly and now it is a competitive industry; when the technology changed, the whole structure of the market had to change in order for it to work well. This is true of almost any market. You must understand enough about any market so you know how it should be structured to make it work the way you want it to. And you also must understand why it is going to change over time.

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Now given all those problems, what can we do about them? Let me be clear: understanding the nature of economies and how they work, and the complex interplay between belief systems and their cultural heritage and how they interact with institutions is the beginning of being intelligent about where we are going. But given all that, there are still real limitations as to what we can do. Those of you who spend a lot of time in the field are more knowledgeable about that than I am. But let me raise three fundamental issues that are going to pose very difficult problems in being able to improve the performance of societies, whether they are our own or other people's. First, and very straightforward, when you go to a third world country and try to improve performance, there is only one of the three elements of institutions that you can alter and that is the formal rules of the game. But, of course, performance is the result of all three: the formal rules, informal norms and their enforcement characteristics.

To illustrate the importance of this issue I will refer you to some history. When Latin American countries became independent in the early nineteenth century, most of them borrowed from the United States Constitution because it was a set of formal rules that looked as though they worked quite well. They worked all right for the United States; but they certainly did not work well for Latin America. The reason is very straightforward; neither their informal norms nor their enforcement characteristics were anything like what they were in the United States. It is not surprising that that is so. Indeed, in general, borrowing rules from another society which has different informal norms and different enforcement characteristics is a guarantee of having a rude shock with respect to the consequences and implications. You have to be conscious about the role of changes in formal rules and how they are

complemented, supplemented or influenced by norms of behaviour, which may be different in every society, and of different enforcement characteristics. Neo-classical economists have gone into countries and said that all you have to do is get the prices right and everything works. They have fallen flat on their faces over and over again. The beginning of wisdom is to recognise how complicated it is to get what you want. Now that does not mean you cannot do something about it; you can. What you need, is to know enough about the background and cultural heritage of a society so you have some feeling for the interplay between the formal rules and the informal norms and the way they work.³ You need also to have a sense of the margins where changes will be effective and what the implications of those changes will be for complementary informal norms and enforcement characteristics. You had better be conscious about the interplay among them if you are going to have any success.

The second issue is that ultimately we get to the political system. Politics are the fundamental stumbling blocks to our ability to improve performance because we do not know how to get politics to work well. Barry Weingast⁴ has begun to make some mileage with what he calls “market induced Federalism”, which is the effort to structure politics in such a way that the competition among different units in politics approximates competition in economic markets. There is a growing literature on this and we are beginning to be able to do something about evolving politics and structuring them in ways that induce politicians to behave in ways that will make them amenable to not lining their pockets. Rather, politicians in their own self-interest will do things that make a difference for improving economic performance.

The third issue is a sobering one. It is not meant to get you all depressed, but it is meant to make you very conscious about the limitations of our ability to solve problems in this world. It is a non-ergodic world. An ergodic world would be one in which there was a fundamental underlying structure to the system such that all you had to do would be to discover it in order to know how to deal with new problems. We think of the physical sciences as being ergodic in the sense that there is a fundamental underlying structure, although lately physicists are having some doubts about this as a result of string theory and all kinds of weird and wonderful things that quantum mechanics is getting them into. Our world is clearly a non-ergodic world. We are creating worlds that never existed before and we are creating them without a self-awareness of what the implications are. To delve further into cognitive science than you may want to delve, we say that if a problem is novel, the degree to which we can solve it will depend upon the way in which the mind interprets new evidence. If you have a mind that has so evolved that it is quite plastic with respect to perceiving new problems and is accustomed to pattern-based reasoning, and if the patterns, therefore, of the new problems are not too different from those that your mind is used to, you solve the problem. But to the degree that we are evolving problems that are novel and for which the mind has no basis for understanding them, they are very difficult to solve. It may be that the new problem is a novelty that we do not understand at all and, therefore, we resort to superstition and myths or religion to provide an explanation. But it may also be that some of us understand the problem but not the people in the position of making political and economic decisions in society. Now that should be sobering. We may well know a lot about how to make adaptable, efficient institutions; but if the people making political and economic decisions either do not understand the nature of the novel problem or think that it would threaten their survival, they are not going to change. Anyway you look at it that is a continuing, never-ending problem of the dynamic world in which we live. We live in an evolving, constantly changing world; we have never had societies – political, economic and social – such as those we are evolving. How well we deal with them, how well we confront new problems, how well we can solve them – those are big questions.

I do not want to depress you, but I also do not want you to think that we are clearly in a world that will always get better and better. The development of science and new knowledge is such that if that was all that governed the future well-being of human beings on the face of the earth, we would have a rosy future. There is no sign of diminishing returns to the stock of new knowledge and its application to solving problems of human scarcity, none at all. In fact, if anything, we are still in a stage of increasing returns with respect to the development of science and its applications. But we must combine new knowledge with the other two dimensions that shape the human experience. One is

demography. That looks as though it is solvable in the sense that fertility and mortality patterns are evolving in ways that probably mean we are not going to have the Malthusian worries that we used to have. The other is the institutional structure. To the degree that problems are evolving, we must evolve institutions, political, economic and social, that will solve those problems. Our best chance of doing it is by developing what I have called elsewhere⁵ adaptive efficiency. Adaptive efficiency kicks in when there are flexible institutions that provide a maximum of choices at a given moment of time. In a world of uncertainty in which nobody knows the right answer, you need to try out a lot of things and hope you will find one that works. And you must also have laws and rules, such as bankruptcy laws, that eliminate those that do not work. If you have a society that creates such an institutional framework, it obviously has the best chance of being successful with respect to survival and continuous performance. Whether we shall succeed depends on all kinds of complications, many of which I have very briefly elaborated upon here. I hope I have given you something to think about. Thank you.

Douglass C. North

Notes

- ¹ J.-P. Platteau, *Institutions, Social Norms and Economic Development* (Harwood Publishers, 2000).
- ² For example, see H. Gintis, “The hitchhiker’s guide to altruism: gene-culture coevolution, and the internationalization of norms”, *Journal of Theoretical Biology*, Vol. 220, Issue 4, February 2003, pp. 407-418.
- ³ Let me give an illustration of how important cultural heritage is. The Chinese so far have not created the institutions of the western world; but they have created similar kinds of incentive structures with the household responsibility system and township and village enterprises (TVEs). Given their own background and cultural heritage, they have created these with their own kinds of rules and laws. And so far the system is working. The reason I say so far is that they have a long way to go. But one does not have to imitate western institutions and cultures. The key objective is to change incentive structures and there are lots of ways of doing that which are compatible with different cultures, different belief systems and different backgrounds. That is why there is no sense in trying to improve the performance of a society without understanding its cultural heritage: that will give you some clues about the kinds of change that can be made at the margin and which will be consistent with that culture and, at the same time, improve performance.
- ⁴ B. Weingast, “The economic role of political institutions: market-preserving federalism and economic development”, *Journal of Law, Economics and Organization II*, Spring 1995, pp. 1-31.
- ⁵ D. North, *Institutions, Institutional Change and Economic Performance* (Cambridge, Cambridge University Press, 1990).