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THE OLD THEORY OF ECONOMIC POLICY AND THE NEW INSTITUTIONALISM*

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I. Introduction

In 1956 the Dutch economist Jan Tinbergen, who shared the first Nobel Prize for Economics, published his classic study Economic Policy: Theory and Design, which deeply affected and reinforced the way economists thought about the policy implications of their work. The volume, and related work, did not propose new economic theories or explicitly evaluate the state of economic science, but made a contribution at a different level. Tinbergen's approach had the flavor of systems analysis in engineering, and his aim was to show how economic knowledge could be organized to regulate and guide economic systems. Economic systems or sectors were represented by structural models, and subsets of variables were defined either as instruments or targets of policy. The theory of economic policy used general assumptions about the structure of economic systems to derive various rules for the optimal design of policy, and specific economic theories were cited only as illustrations.

In retrospect, it is apparent that the old theory of economic policy emerged in an age of excessive expectations and reflected the hopes of welfare economics (Samuelson 1947, Chapter 8; Bergson 1938), the Keynesian Revolution, and the new field of development economics (Kindleberger 1958). Of course, Tinbergen, and other early contributors to the theory of economic policy, knew that policy targets are shaped by political forces and policy often is dominated by uncertainty, but the spirit of the times defined how the economics profession absorbed and adapted the Tinbergen framework. Mainstream contributions on economic policy usually made the following

explicit or implicit assumptions:

(1) The goals or targets of economic policy (target preference functions, social welfare functions) are given or they are derived from concepts of efficiency in economic theory and from notions of justice in philosophy and related fields.

(2) The basic structural relationships of economic systems are known. Structure may limit the scope of policy and put certain targets out of reach, but policy failures generally are not caused by limited knowledge and inaccurate policy models.

Furthermore, mainstream economics concentrated on quantitative policy within a given economic system, rather than on structural policy which seeks to transform economic systems from one basic type or structure to another. When policy involved system changes, typically it was assumed that the introduction of quantitative policy appropriate for a new system would generate the required institutional and structural change. Similar views are still common, for instance, in the debate over the transition to markets of the former soviet economies of Eurasia.

In the last quarter of the Twentieth Century, unexpected difficulties in manipulating Western economic systems, both at the micro and macro levels (Posner 1986, Part III; Lucas 1976), undermined the optimism of the early postwar era. Moreover, poorly understood successes and failures in the Third World (Hirschman 1981), and theoretical quandary over the transition to markets in Eurasia (Murrell 1995) demonstrated that mainstream economics is ill equipped to prescribe structural change. These developments coincided with new approaches to economic systems that recognize both the interplay between economics and politics and a range of various information problems. These fresh perspectives mostly appeared on the fringes of the discipline in fields such as political economy, public choice, the economics of institutions, economics of law, and property rights economics, although explicit recognition that information is a scarce resource slowly is transforming all of economics (Kreps 1990; Stiglitz 1994).

The current state of affairs is somewhat paradoxical. While many traditional economists still retain the world-view of the old theory of economic policy, the new theoretical developments are weakly oriented toward policy. Although the new

institutionalism has much to say about the nature of political and economic systems, it seldom makes explicit the implications for the design of public policy.[1] In this essay, I attempt: (a) to confront the new institutionalism with the theory of economic policy, and (b) to confront the old theory of economic policy with new policy dimensions that follow from the new institutionalism. Like Tinbergen (1956), I do not survey the vast literature that has emerged or evaluate the content of specific models, but proceed at a more general level and use particular theories for illustrative purposes. My concern is with basic implications of recent theoretical developments for the design of economic policy, particularly structural policy.

For interested readers, comprehensive surveys and evaluations of the new institutionalism are readily available. Mueller (1989) covers the public choice literature; Sandier (1992), and Hardin (1982) thoroughly examine collective action; Eggertsson (1990) reports on rational choice institutionalism in economics and politics, and so do Furubotn and Richter (eds. 1993); Alt and Shepsle (eds.1990) provide important essays on the new political economy; and an excellent account of the new economics of organization is found in Milgrom and Roberts (1992). Surveys are imperfect substitutes for the modern classics, such as Olson (1965) on the logic of collective action, Williamson (1985) on the organization of production under capitalism, Buchanan and Tullock (1962) on decision processes in the political domain, Riker (1962) on political coalitions, Arrow (1974a; 1952) on limits of organization, and social choice, Coase (1937; 1960; 1988) on social cost, and the nature of the firm, Downs (1957) on economic analysis of democracy, Demsetz (1988) and Alchian (1977) on property rights, North (1981; 1990) on institutional change, and Bhagvati (1978), and Krueger (1978) on the political economy of international trade. Although they go by a variety of labels, these and related studies jointly contribute toward a better understanding of

[1] Avinash Dixit's (1996) important new book ~~The Making of Economic Policy. A Transaction-Cost Politics Perspective~~ is a sign that economists have recognized that the policy implications of the new institutionalism need to be worked out explicitly. It is interesting to note that Professor Dixit describes himself as an outsider looking at the new institutional ism.

the structure of social systems, and toward a new institutionalism based on methodological individualism and purposeful action (some form of rational choice).[2]

It is not easy to summarize the divergent literature on institutions in economics and related fields, but in terms of public policy I argue that these studies highlight three conceptual issues or dimensions — social choice, the economics of institutions, and information problems — which received little emphasis in the old theory of economic policy.

(1) A vast literature examining choice in the political domain has emerged and contributes to the study of public policy by attempting to endogenize the target preference functions of policy makers. These efforts involve modeling the behavior of rulers, politicians, lobbyists, and the general public, along with the social choice mechanisms that are embedded in voting rules and other structures and procedures of political bodies.

(2) Another line of research examines the link between institutions, transaction costs, incentives, economic behavior, and outcomes. The fundamental idea here is that the methods used for controlling scarce resources (property rights systems, institutional frameworks, systems of rules) have critical implications for economic results.[3] Some traditionalists assume general wealth maximization and use these concepts to derive the institutional conditions for wealth maximization, and thus attempt to endogenize the structure of economic systems in terms of economic efficiency. An important segment of the literature, however, focuses on comparative studies of imperfect institutions, and on the interaction between politics and economics, which is the concern of this essay.

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[2] In this essay, I do not consider various other approaches to institutions, such as holistic approaches, and studies that employ biological and evolutionary concepts. My impression is that these alternatives are less concerned with public policy than rational choice institutionalism.

[3] I purposefully avoid the terms property rights (or rights) because many people (a) associated these words with private ownership, and (b) think that they imply that private ownership is morally right. The word control is less charged.

(3) In its study of social choice and the link between institutions and wealth, the new institutionalism recognizes scarce information and knowledge as a fundamental force, and information problems costs typically play an important role in explaining economic and political behavior and structures.. In the discussion below, I follow Arrow (1974b) by synthesizing a wide range of viewpoints and studies and representing them as a response to information problems. Scarce information gives rise to transaction costs and the control problem, which are the unifying attributes of the new rational choice institutionalism. For public policy, the information perspective suggests not only that the enforcement of policy often is costly and incomplete, but also that public and private actors may have limited knowledge of how their social systems function.

Because of their interaction, a theory of public policy based on the new institutionalism cannot isolate economic problems from political problems or ignore information issues and transaction costs. The idea that economic judgments can be isolated from political considerations is invalid. Dixit (1996, p. 150) says it well: "This argument appears to assume that economic and political aspects are additively separable in their effects — that one can analyze each separately and then find the total effect by adding together the two calculations. But that is not in general true. The effects of one interact with the other, and one aspect cannot be inserted after the other to get a complete and accurate picture."

The three issues outlined above motivate, this essay, which has five additional sections. Section 2 summarizes the main elements of the old theory of economic policy. Section 3 compares quantitative and structural policy, and introduces the notion of policy with endogenous politicians and incomplete policy models. Section 4 looks at the implications for a new theory of economic policy of informal institutions, the problem of control, and incomplete policy models. Section 5 examines the question of policy determinacy, which appears to follow from the notion of endogenous politicians. What can social scientists contribute to policy when policy choices are predetermined by the personal interests of those in power? The last section summarizes the lessons of the new institutionalism for policy design, and contains thoughts on the possibility and

implications of a general theory of structural policy; policy implications of control problems; the idea of policy models as targets of policy; and ends by draws attention to the implications for policy of a disturbing but unresolved and controversial issue in the new institutionalism, long-term pathological path dependence.

II. The old theory of economic policy

Hansen (1963), in a perceptive discussion of the theory of economic policy, emphasizes the central role of models in the formulation of policy. As all policy aims at influencing economic outcomes or processes, policy makers must rely on a model — a description — of the economic system, which often is little more than a rough qualitative picture (Hansen 1963, 3). Few would disagree that models also are central to policy based on the new institutionalism, but below I make the additional claim that the assumption of scarce knowledge and information implies that models of both policy makers and private actors are incomplete and variable, and evolve through some form of learning, often learning by doing.

A formal model of an economic system, such as a firm, a market, or an economy, can be written in the following general way:

$$(1) \qquad f_i(x_1,\ldots, x_n; a_1,\ldots, a_m) = 0 \qquad i=1,\ldots,n$$

In equation (1), $x_1,\ldots,x_n$ are n endogenous variables, and $a_1,\ldots,a_m$ are m exogenous variables, lagged variables, or parameters some of which (for instance, exchange rates, tax rates, base money, price ceilings, import restrictions, plan indicators, or agricultural production quotas) are controlled by the policy actor (Hansen 1963, 5). Note a subtle distinction here in the meaning of exogeny. All the exogenous variables in (1) are exogenous for the actors of the social system that the model attempts to describe. The policy makers, however, are distinct from other players in the social system and control some of the exogenous variables, the potential instruments of policy, whereas other exogenous variables constrain their actions.

The policy model describes the choices open to policy makers: their opportunities to reach targets (desired values of endogenous variables) by applying instruments (exogenous variables that they control). Policy targets (goals) are derived from the preferences of policy makers — rulers, politicians, administrators, social scientists, lobbyists, and voters. The structure of the policy model prescribes what target values are attainable and how they are reached. Policy targets can be absolute or the policy maker weighs target variables together in a target preference function T(x1,...,xn).[4] Economic policy uses policy instruments to reach either absolute targets or to maximize the target preference function. When targets are fixed (or when target preference functions are maximized without limitations), basic logic suggest two well-known rules of thumb: (1) In general, "the number of instruments should be (at least) equal to the number of targets;"[5] (2) each instrument should not be assigned to a specific target, but all instruments should be coordinated and directed towards the set of targets (Bent Hansen 1963; *7)."*

Finally, the structure of the policy model has important implications for policy. The structure describes the interrelationships among the variables in the model

[4] Instruments often are valued in themselves, which may prevent their use or limit the range they take, for instance when high interest rates are socially objectionable (Hansen 1963; 12). When instruments are valued, the instrument variables also appear in the target preference function.

[5] For instance, think of a market where equilibrium quantity and price (P1,Q1) is determined by the intersection of the supply and demand curves. The authorities now set a target of (P2,Q2). A single instrument that either moves one of the two curves or shifts both of them along some fixed path would reach the new target (P2,Q2) only by coincidence. In general, two policy instruments are needed to reach (P2,Q2)-

[6] To extend the example of the previous footnote, imagine that policy actor A controls one instrument and has P2 for a target, and actor B controls a different instrument and has Q2 as a target. It can be shown that without coordination, the efforts of the two actors can produce oscillations around (P2,Q2) that do not necessarily converge on the target.

(equation 1), and determines whether the model can be divided into autonomous departments. Following Simon (1953), all endogenous variables and instruments in a policy model can be arranged according to causal ordering from the first order to the highest, Nth, order. Instruments of the Nth order influence targets of the Nth order without affecting lower orders of the system. However, the use of first-order instruments has repercussions not only for first-order target variables but also for endogenous variables at higher levels, potentially throughout the system (Hansen 1963; 18-22).

III. New perspectives and the old theory

The Tinbergen framework continues to be an essential part of our mental apparatus. When prescribing policy, economists still think, explicitly or implicitly, in terms of models that describe relationships between instruments and targets that are represented by target preference functions. The business of economic policy, however, has become far more complex after economists have recognized endogenous target preference functions, the complexities of structural change, and the implications of scarce knowledge and information. In this section I discuss (a) the general requirements of structural policy, (b) policy with endogenous policy makers, and (c) policy under information scarcity.

(a) requirements of structural policy

The old theory of economic policy distinguishes between quantitative policy and qualitative or structural policy. Quantitative policy takes as given the basic structure of the economic system (or sub-system) and seeks to manipulate existing economic relationships toward some end. Until recently, the findings of mainstream economic theory primarily were relevant for quantitative policy (mostly in market systems based on exclusive private ownership) because the theory made few attempts to endogenize or explain the institutions and organizations of economic systems. Structural policy seeks to change fundamentally the structure of equation (1), which may involve new variables and new relationships, for instance, when central planning replaces market

exchange or when the structure of a firm changes from a partnership to an open corporation. Here the (immediate) goal is not to find an appropriate value for a target variable in the quantitative policy model, but a new relationship between (new) instruments and targets.

I find it useful to maintain the separation of quantitative policy from structural policy, although the distinction between the two is more blurred than it may appear. The reason is that apparent quantitative policy initiatives (such as rent control, increase in tax rates, or new welfare benefits) may give rise to a process that fundamentally changes the social system. Dixit (1996, p. 144) elaborates this point and argues that most policy acts lie somewhere between these two poles. In terms of the more recent literature, the old distinction between quantitative and structural policy resembles Lucas's (1990) distinction between policy regime and policy action, and Buchanan's (1975, 1987) constitution-making and policy-making within a constitution.

Implementation of structural policy and major institutional change obviously invites a new quantitative policy (and a new quantitative policy model) because the new system also must be managed. Furthermore, if the transition to the target structure is slow, appropriate quantitative policy is required for an orderly operation of the system at each stage during the transition period (McKinnon 1991). Therefore, the process initiated by structural policy demands much more from economic theory, and from policy makers, than does (static) quantitative policy.

Unlike quantitative policy, structural policy cannot avoid a theory of institutions and institutional change, but the causal ordering in the social system determines how complex theory is required. Policy makers can conserve their brain power and use relatively simple models, if there exist low-order instruments that generate spontaneous adjustments in target variables — critical institutions — throughout the system. For instance, the transition to markets in Russia and Eastern Europe does not require complex policy models, if the desired market institutions and organizations emerge autonomously once 'prices are set free' (Murrell 1995). The structure of the social system is an empirical question, but, as a rule of thumb, policy makers in a world of scarce information usually do well by searching for powerful low-order instruments.

(b) policy with endogenous politicians

The old theory, which was concerned primarily with quantitative microeconomic and macroeconomic relationships, frequently assumed that target preference functions of policy makers coincided with the usual normative standards in economic theory.[7] Macroeconomics pursued stability and growth, microeconomics strove for allocative efficiency.[8] When these assumptions about political behavior were untenable, policy targets usually were taken as given. Traditional policy analysis usually did not deal with the incentives and behavior of political actors or the influence of political processes on targets for growth, stability, pollution abatement, regulation in agriculture, or the division of public investment funds among sectors and enterprises.

In recent decades various scholars have extended the policy model and endogenous politicians and endogenous policies now appear in the literature (Rodrick 1996; McGuire and Olson 1996; Olson 1993; North 1979). Fields such as public choice, political economy, and political macroeconomics attempt to endogenize the choice of targets and instruments and provide elements for a positive theory of structural change (Mueller 1989; Alt & Shepsle, eds., 1990; Hettich & Winer 1993: Alesina 1991). In designing structural policy, policy analysts require a theory of endogenous politicians more urgently than in formulating quantitative policy. Pure quantitative economic policy typically (but not always) leaves intact the political equilibrium, particularly when policy measures bring the intended results. In political equilibrium, those in power tend to agree on traditional normative economic goals such as stability, growth,

[7] Until it recognized incomplete information and transaction costs, mainstream economics did not examine the structure of economic organization — the firm, the market, and the law (Coase 1988).

[8] Macroeconomics has less clearly defined normative standards than microeconomic welfare theory. For instance, macroeconomics is not explicit about desirable relative weights for stable prices, full employment, and economic growth in the target preference function. Therefore the old policy perspective recognized that different political parties might favor different weights.

and allocative efficiency, ~~within~~ the existing institutional framework (which sometimes leaves little or no scope for substantial economic progress).[9] In a relatively stable world, the role of those who control and coordinate key policy instruments usually is well-defined and clearly established. There is little doubt about the policy space of actors such as the central bank, the finance ministry, the environmental protection agency, or the central planning bureau. Policy analysts have ~~relatively~~ little need for an elaborate positive political theory to identify the set of politically sustainable policies.[10]

Structural change, on the other hand, frequently is associated with political instability. Substantial structural measures usually alter the distribution of wealth and power and often emerge in times of political upheaval or when existing institutions are thought to have failed. The choice of new economic structures frequently involves political disputes and struggles that render uncertain the control and coordination of policy instruments, especially over time. To formulate viable economic policy in an unstable environment and minimize the likelihood of policy reversals, the analyst has a relatively great need for a model that allows for interactions among economic, political, and social activities. The need to include politics in the policy model is particularly obvious when experts seek strategies for instituting economic measures that (at least in the short-run) have uncertain support among the general public, or even among those in power. Some economists recommend shock treatments or big-bang measures for the transition to markets of former soviet economies partly because strong measures are likely to overwhelm a disillusioned public or unreliable politicians and even create

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[9] In the language of welfare economics, those in power only agree on measures that for them represent Pareto improvements, given the prevailing allocation of resources, power, and wealth.

[10] Even though successful quantitative policy measures are not a major sources of political instability, the political system may be in disequilibrium for some other reason. In an unstable political environment, even quantitative policy is likely to involve uncertainties about available instruments and politically sustainable policies.

irreversible structural changes (Aslund 1995).[11]

(c) Policy under information scarcity

In the last decades of the twentieth century, economics increasingly has turned to examining various aspects of information scarcity for economic behavior (Coase 1960; Diamond & Rothschild, eds., 1989; Hirshleifer & Riley 1979,1992; Stiglitz 1994). The common assertion that traditional neoclassical economics assumes full information is not entirely correct, partly because it is nearly impossible to imagine and analyze a social system with full information.[12] Traditional neoclassical economics rests on a mixture of, often inconsistent, explicit and implicit assumptions concerning the information environment of the actors. For instance, the theory recognizes phenomena such as firms and externalities that have no role a world of full information and zero transaction costs (Coase 1988). Similarly, neoclassical economics allows for (exogenous) technological change that periodically expands the information set of actors.

Theories of social systems which explicitly recognize that actors live in a world of scarce information confront three types of information issues: (a) scarce data and knowledge; (b) the limited mental capacity of actors to absorb and process data, and to make decisions; and (c) the propensity of actors to economize on scarce data, limited knowledge, and limited mental capacity by making simple and often inaccurate models of their environment; I refer to these three issues as incomplete data, incomplete processing, and incomplete models. The information revolution in social science of the last few decades mostly has concentrated on incomplete data, and incomplete

[11] The moral standing of expert who try to feed politicians and the public on policies that they are reluctant to swallow is an interesting normative puzzle which this essay does not examine.

[12] The tedious debate in the literature over the validity of the Coase Theorem, which concerns the allocation of resources in an economy with no transaction costs, is rooted mostly in different assumptions about the nature of a world with full information and zero transaction costs (Cooter 1982).

processing, although the notion of incomplete models sometimes receives attention." A new theory of economic policy must recognize all three types of information problems and analyze how they affect not only the design of public policy but also the response of private actors to public policy.

Even during the heyday of traditional welfare economics and the macroeconomics of fine tuning, several first-rate scholars explicitly recognized that incomplete data and models might undermine ambitious economic policy. In macroeconomics, skeptics argued that various lags of uncertain length could pervert the timing of corrective measures and even turn them into destabilizing impulses (Hansen 1963, 31-36; Friedman 1961).[14] In the 1970s, when macroeconomics acquired formal microfoundations, the theory explicitly recognized interactions between public and private policy models. The early rational expectations school assumes that economic actors absorb policy models used by the authorities, which enables the actors to undermine or neutralize economic policy, except for random policy measures (Lucas 1976)."

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[13] In his recent work, Douglass North has been concerned with all three aspects of the information problem (North 1990, 1993, 1994; Denzau & North 1994). My discussion of information scarcity is inspired by North's work. Simon (1957) introduced the concept of satisficing partly to model the problem of limited processing, and later Williamson (1974) applied the related concept of bounded rationality in his theory of organization. Bounded rationality is purposive (rational) behavior subject to information constraints.

[14] Lags of uncertain length include: (a) the interval between an exogenous disturbance (for instance, an oil shock) and its impact on target variables (the price level, balance of payments); (b) the interval between policy recommendations by government experts, their acceptance by the political process, and the implementation by administrative bureaus; c) the interval between corrective policy measures and their impact on target variables; Also, the size of the various effects is incompletely known.

[15] Already in 1938 Ragnar Frisch, the Norwegian economist, criticized Tinbergen for bis policy models and argued that model structures would shift when policy changed (Heckman 1992).

Contributions to microeconomics also have recognized the interplay between public and private policy models in individual markets (without explicitly using the term policy model). Private-public interaction is implicit, for instance, in the work of Steven N. S. Cheung, who pioneered the economics of contracts (Cheung 1974), but, unlike Lucas, Cheung assumes that both private and public actors rely on incomplete models. In his studies of rent control in Hong Kong, Cheung (1975, 1976) shows that initially regulators lacked knowledge of how private actors and the rental market as a whole would adjust to price ceilings. When the price mechanism is restricted, private actors respond with adjustments on various margins, such as by transforming residential buildings into unregulated warehouses, or by premature demolition and rebuilding of houses. The new equilibrium, therefore, may involve unexpected features both for private and public actors. Cheung's empirical work demonstrates nevertheless that skillful regulators often are able to use trial and error to acquire knowledge about private models, which they use to revise the public policy model, design more effective policy measures, avoid unwanted side-effects, and eventually come tolerably close to their policy targets.

IV. The design of control in a world of limited information and knowledge

(a) the problem of informal institutions

Rational choice institutionalism emphasizes how institutions affect the information available to actors and their incentives; and how transaction costs and incentives affect behavior and outcomes, both in the economics and politics. The critical social element underlying incentives are rules — institutions — which directly or indirectly assign to actors control over scarce resources. Institutional change, therefore, involves a new structure of control in the economic and political domains.

Not all rules are institutions, but only rules that influence incentives or, in the language of game theory, rules that affect the expected payoffs of actors. A change in rules that leaves all payoff equations unaffected does not count as institutional change

because rules are not institutions when they are not enforced or voluntarily obeyed. People obey restrictive rules for three reasons: (a) to avoid the cost of penalties imposed by public bodies (fines, imprisonment), (b) to avoid social sanctions and retaliation by members of their community (private enforcement, loss of respect and trust), (c) for moral reasons (ethical standards of conduct, religious codes of behavior). Public policy can manipulate official sanctions directly by specifying punishment and by allocating resources to enforcement, but the cost of official sanctions often is unacceptably high when public enforcement is not supported by social and moral sanctions.

Various forces drive social sanctions. At one level, the sanctions may rest on nothing more than a shared demand for social coordination, and people may be ready to change to an equivalent but different form of coordination, if it can be arranged. Social sanction also rest on general principles, such as the idea that one always should obey the law. Economic theory suggests that many people give up such principles when the net cost of living by them substantially increases. In addition, social sanctions are derived from specific codes of conduct (such as dietary rules) that are rooted in the history and experience of a social group. Sometimes such codes also have been written into law, and official and social sanctions reinforce each other. Finally, social values affect the moral outlook of people and restrain them, even when they have no reason to expect either social or official sanctions.

Constraints on behavior that are determined by social sanctions or by social values usually are associated with <u>informal institutions</u>, which are rules that are not explicitly created by collective action and formally implemented by enforcement organizations (North 1990).[16] The implications of informal institutions for economic policy is a sore spot on the new institutionalism, because little is known about the evolution, emergence, and decay of informal institutions and how they interact with

[16] In the literature, informal institutions sometimes are taken to include formal rules that originate with economic and social organizations, such as the formal internal rules of a factory, a condominium or a clan. These rules, however, are simply micro-political rules and conceptually no different from rules emanating from legislatures or town councils.

formal institutions. Most studies either ignore informal institutions or treat them as exogenous variables. From the viewpoint of structural policy, it is of utmost important to understand to what extent policy makers directly can influence informal institutions, and within what timeframe; the extent which informal institutions adjust to formal institutions; and the extent to which the stock of informal institutions will undermine specific public policy initiatives. Questions of this nature are of paramount importance for policies of economic development or transitions to markets, and I return to these issues in the paper's last section.

(b) incomplete data and the problem of control

Walrasian neoclassical economics leaves no room for waste and dissipation of resources, because voluntary exchange takes advantage of all gains from trade. The so called Coase Theorem reinforces the optimistic conclusions of neoclassical economics. Coase (1960) showed that the initial allocation of resources does not matter for the efficient allocation of resources, provided that people freely can exchange their control over resources, in addition to goods and services (Cooter 1982).[17] According to Coase, resources find their highest valued use, when there are no transaction costs. If land used for farming becomes more valuable (in terms of market value) as a parking lot, the farmer will trade her control of the land to a potential parking lot operator. The state, however, may enforce inefficient rules that prohibit such transactions, but the problem of inefficient rules disappears (in theory) when we also assume costless exchange in the political sphere. Rational rulers and subjects will agree on rules that maximize the size of the pie, and then divide it among themselves on the basis of their relative power.

In his famous essay on the problem of social cost, Coase's (1960) main point was to emphasize that transaction costs are <u>not</u> zero and, therefore, the initial allocation of control matters, and so do also various arrangements for controlling the use of resources, such as laws, regulations, firms, and contracts. When private exchange

[17] Initial allocation still affects the relative wealth of the actors, and hence the pattern of demand (which reflects preferences and the distribution of purchasing power), and relative prices.

cannot transfer resources to their most valued uses because of high transaction costs, conceptually the state could do so by designing appropriate rules and assignment processes. Transaction costs, however, are no less a problem in the political sphere than in the economy, even more so, and we have no reason to expect a priori that political processes will produce efficient economic institutions (Olson 1965; Bates 1990; Moe 1990; Weingast 1995; Dixit 1996). Transaction costs, hence, move inward the neoclassical production frontier of an economic system, not once but twice. First because of the negative impact of transaction costs on net output with the best possible institutional arrangements, and, second, because even the best possible economic institutions do not emerge in political processes with transaction costs (Eggertsson 1994).

If one tries to convey in one word the fundamental idea which motivates much of the new institutional literature, it is the word control. To give a few examples: the cost of control generates free riding and has a central role in Olson's (1965) logic of collective action, and in explaining the dissipating institutions of his roving bandits (1993). It is a quest for control which explains the nature of economic organizations and market arrangements in the work of Williamson (1985), Barzel (1989), and Greif (1993), and the same is true of Weingast and Marshall's (1988) industrial organization congress.

Usually, the literature on institutions introduces the idea of costly control by adding the assumption of incomplete data (costly measurement), although some scholars, such as Williamson also assume incomplete processing (bounded rationality).[18] It is, therefore, the union of incomplete data and processing with the control problem which has given the new institutionalism its distinctive flavor. In

[18] Williamson (1985). Recently the control problem also has become a central concern of mainstream microeconomics, as reflected, for instance, in agency theory and in models with asymmetric information. The formal mathematical models of microeconomics tend to simplify the control problem by reducing the number of valuable margins for which control is required — presumably to limit mathematical complexity (Stiglitz 1994; Werin & Wijkander, eds., 1992).

simple terms, the story runs like this: Costly measurement is responsible for incomplete data. Incomplete data raise the cost of verifying quality and monitoring behavior, which draws attention to complexity in economic and political life: commodities and behavior usually have multiple valuable dimensions or margins in space and time.[19] Rising marginal cost in acquiring data (measurement) and in enforcement suggests that actors usually are unable to fully control all margins of resources over which they have nominal control.[20] Therefore, incomplete control is a universal problem, and, as economics first recognized in the case of open-access fisheries, lack of control generates incentives that can lead actors to dissipate wealth. Barzel (1989) and others emphasize that in most cases it would be inefficient for actors to attempt full control of resources, because costs would outweigh benefits, and, hence, a certain amount of "waste" is efficient, when waste is defined in terms of the traditional neoclassical model.

The control by actors over resources has an external and an internal source. Institutions, which represent socially and politically assigned control through enforcement of norms, regulations, and laws, are the external source, but various measures taken by the actors themselves, for instance monitoring, fencing, and locking up valuables or contracting with other actors, are the internal source of control. In the literature, the cost of establishing and maintaining control of resources, both in exchange and in use, commonly is known as transaction costs (Pejovich 1996).[21] Because transaction costs act as barriers to productive activity, a structural policy that seeks to increase the capacity of an economic system to generate wealth must design institutions which lower transaction costs (North 1990).

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[19] With full information, people would know in advance present and future behavior and capacities of each other, and relative advantage (including relative advantage in violence) would determine cooperation and control (Umbeck 1981).

[20] The benefits of control depend on the actor's time horizon. A short time horizon limits incentives for investing in control, as Olson's roving bandits only know too well.

[21] Allen (1991) sorts out the considerable confusion in the literature over the definition of transaction costs.

(c) incomplete policy models and the theory of economic policy

The central role of policy models in the old theory of economic policy suggests a dimension that the new institutionalism hardly has touched on, in spite of its emphasis on information problems: the idea that incomplete information and knowledge suggests that people often rely on incomplete and often inaccurate policy models. Admittedly, many studies talk about people's beliefs and ideas, but seldom is there sharp distinction between (1) fundamental preferences, (2) a model of the social system, (3) instruments, (4) targets, and (5) the process people use to update their models. Furthermore, many scholars don't make a distinction between incomplete data for testing a model and incomplete or erroneous model. Below, I discuss the notion of an incomplete policy model in the context of a theory of economic policy.

(1) Policy models frequently are incomplete and erroneous. New data can be used to test, update, and possibly improve a model, but inaccurate models also are used to evaluate and draw conclusions from available data. Different models using the same data may come to very different conclusions.

(2) Ever}' decision unit in a social system makes policy decisions on a small Or a large scale, not only public actors but also private actors in households, firms, and social organizations. Both private and public actors rely on policy models. These formal and informal models vary with the nature of the policy problem and may involve aspects of the physical world, the social system, and the moral order.

(3) In many instances, public policy will fail unless it recognizes how private actors use their models to respond to policy initiatives. Policy making frequently is a repeated game, a process of interaction between private and public policy models, involving learning, and a sequence of adjustments by all parties.

(4) Public policy is not limited to directly creating new constraints and opportunities for actors. The authorities also attempt to reach their policy goals by supplying information intended to influence private policy models. For instance, the success of public policy frequently hinges on the credibility of new measures. Attempts by the state to make a credible commitment to its policies, involves influencing private

policy models (North 1993; Weingast 1993).[22]

When we recognize that revision of models (learning, persuasion) often is critical for the success of public policy, the revision process itself becomes of great practical interest. Rational choice social science relies on rules drawn from logic, mathematics, and probability theory and assumes that social actors use the universal logical rules of science for updating their beliefs or models. Even when this approach treats the origins of private models as exogenous, the assumption that actors use the general rules of science to update their models (for instance, Bayes' rule) implicitly suggests that the models originate as purely logical or statistical interpretations of available data. The problem here is that the logical approach is not able to explain creative and selective interpretation of available data, which often may be important.

For many purposes, however, scholars are able to use standard logic to explain how actors revise their models and behavior. For instance, in a recent study Bates and Weingast (1995) investigate revolutionary transformations in Zambia (movement to democracy) and in the former Yugoslavia (eruption of violent communal conflict) in terms of the updating of shared private beliefs (models). Bates and Weingast model interactions between the players as signaling games, where Bayes' rule is used to update models when new data (signals) become available. The paper demonstrates how a policy maker (Milosevic) can bring about a major change in social systems by manipulating signals.

When rulers attempt to manipulate private models, or in general make policy, they require a realistic image of how people see the relevant parts of their environment. Kuran (1995) explains why actors often falsify their preferences and consequently their models. If public policy makers base their strategies on false representations of private models, their policies may fail, sometimes startlingly. Kuran (1995) makes a convincing case that switches between the false and the underlying models often follow a nonlinear relationship. Nonlinearity implies that a relatively small amount of new data can bring massive changes in revealed models and rapid social change, such as the collapse of an apparently powerful regime.

[22] Of course, valuable information and influence also flows the other way.

Some scholars, who question whether actors always use standard mathematical logic to update their models, have explored alternative formulations (Denzau and North 1994). Cognitive psychology and evolutionary biology argues that the human mind relies on "a large and heterogeneous network of functionally specialized computational devices," rather than being a general purpose computer. (Cosmides and Tooby 1994, 329; Tooby & Cosmides 1992.) A union of evolutionary psychology and economics "might be able to create a science of preferences" (Cosmides and Tooby 1994, 331) and improve our understanding of how actors model their environment, especially the moral order.

In sum, a new theory of structural policy must recognize variable and incomplete models at different levels, and allow for interactions between public policy models and private models. In its present state, social science is equipped to do this only by using the general-purpose rational methods of science. However, updating often appears to be more complex than standard logic suggests. When models persist in spite of seemingly contradictory feedbacks or when models of the moral order seem to guide behavior, traditional logic often fails to explain the emergence, maintenance and decay of such models. Also, intentional falsification of preferences and of models complicates the analysis, not to mention empirical studies, of the updating process. Although the expanding frontier of research now has reached these issues, findings in evolutionary psychology, by and large, have not been integrated with social science and little is understood about implications of the new decision theories for structural policy.

V. Degrees of freedom in institutional change: the determinacy dilemma.

Rational choice social science, which assumes that all actors optimize under their constraints, implicitly suggests that, with endogenous politicians, policy is determined endogenously in the economic and political system with few or no degrees of freedom for expert advise. For instance, destructive polices in **a** Third World country that bring economic decline are readily explained as the logical outcome of coalition politics,

which does not leave much space for expert advise (Bates 1981).[23] If people optimize rigorously only in their capacity as economic actors, and not in their social and political roles, there still may be considerable room for reforms and persuasion by experts. With general optimization, it seems that the policy choice set shrinks and approaches an empty set. Only unexpected exogenous impulses are able to upset the political balance and create condition for a change in the policy regime, or so it seems. It is important not to misunderstand the implications of this theoretical problem. Optimization does not suggest prosperity, and optimization leads to the best-of-all-worlds only in the narrow technical sense of the best choice under constraints — for instance, sometimes the optimal treatment of a wounded leg is to amputate it, although in general there is nothing optimal about loosing a leg.

With all actors optimizing, why do some nations perform very poorly relative to others? Olson (1996), in a perceptive discussion, begins by noting that economic failure either is caused by limited resources and inability to access latest technology or by a political failure to provide appropriate institutions for growth. He then demonstrates that the empirical evidence overwhelmingly points to political and institutional failure. But the dilemma remains. What scope is there for institutional change? Why should optimizing politicians agree to reverse their policies and reform the institutional framework?

In part, the determinacy dilemma that I have described is a real one. For political reasons, rulers in various countries around the world have followed policies that presumably even they recognize as unsound from a purely economic viewpoint, and, therefore, these leaders have reaped what they sowed. But the dilemma of policy determinacy implicitly assumes that the policy makers rely on complete models of economic and social systems, rather than on incomplete and erroneous ones. In a world of incomplete and competing models, where data and processing capacities are scarce, policy is a dynamic discovery process, which may generate unexpected and unwanted outcomes and create new political realities with flexible roles for policy

[23] Of course the notion of endogenous politicians suggests the phenomenon of endogenous experts, such as economists, who have various personal agendas.

experts. Somewhat along these lines, Dixit (1996, p. 153) states that opportunities for recommending regime changes "generally arises at times of "breaks" in the system, when major flaws in the previous arrangements are apparent..." Dixit also argues that reforms at the constitution-end of the policy spectrum often involve relatively great uncertainty about the consequences, which gives some leeway to economists and other experts. Both these arguments imply incomplete policy models.

Institutions can be sub-optimal or imperfect in either of two ways: In a normative or external sense when other known arrangements are thought to perform better on some criterion, such as the aggregate wealth criterion. An economists using the wealth criterion may label the institutions of country X as imperfect because they give rise to less wealth than the institutions of country Y. One also can conceive of institutions that are endogenously imperfect, but only in the following retrospective sense. Political actors, looking back at policy measures which they introduced (or favored) in the recent past, sometimes conclude that the original decision was a mistake because the new institutions have produced unexpected and undesirable outcomes.[24] The actors now feel that they should have favored an alternative set of institutions that was available at the time of the original institutional change (but at present may or may not be feasible). In extreme cases, retrospective rejection of institutional arrangements can span (almost) the whole political spectrum (Eggertsson 1996).

Unforeseen paths of development initiated by institutional change come in many shapes. Institutional change may initiate destructive competition on many margins, evasion through various loopholes, opportunism by administrators, rent seeking, capture of regulatory agencies by industry, changes in behavior by recipients of subsidies, and new aggregate properties for the social system. These developments frequently are associated with a sequence of revisions in public and private policy models. The changing fortunes of the Nordic welfare state illustrate my point about such adjustments.

[24] The rejection must be based on new knowledge or experience. If the leaders correctly foresaw the development path, and all along planned to discard the institutions at a particular point in time then obviously the institutions are not retrospectively imperfect.

Lindbeck (1994,1995) discusses how welfare state policies in Sweden created not only a virtuous circle of benefits but also an unexpected, undesired, and vicious circle of problems. The problems are associated with delayed changes in the behavior of households, interest groups, public sector administrators, and politicians. These changes in behavior affected work effort, labor force participation, savings, asset choice, entrepreneurship, and short-term macroeconomic stability, and, through all this, shrunk the tax base of the welfare state. In analyzing these changes in behavior, Lindbeck recognizes the importance of incomplete data (for instance, delays in obtaining information about new welfare programs), but, in terms of this essay, he puts greatest weight on incomplete and variable public and private policy models. As the welfare system unfolded, the various types of actors, from households to politicians, revised their policy models. Lindbeck (1995) argues that the actors did more than update their models of the social system and adjust their strategies for a new environment. The actors also revamped their models of the moral order, and updated their shared social values, which may involve new preferences.

Lindbeck's story suggests, therefore, that we can analyze the Nordic welfare state in terms of a policy process based on incomplete models. At the highest level, public policy models (presumably) failed to allow for delayed adjustments in various structural relationships for the system as a whole (for instance, in labor supply or in savings ratios). The policy failure at the top is related to a misreading of private policy models, particularly to a failure to recognize how actors revise their models, targets, and policies. A revision of private policy models can change both individual behavior and the structure and performance of organizations (households, social networks, firms, public agencies), which are the engine of social action. In Nordic social networks, interactive revision of private models apparently first lowered the cost (stigma) of being a bona fide welfare recipient, and then the cost of being a welfare chiseler (Lindbeck 1995). The economics literature provides various other insights into dynamic interactions between policy makers and their subjects, which can be attributed to imperfect and variable models. Work by Krueger (1993, 1978) and by Bhagwati (1978) dealing developing countries is particularly impressive. They provide an

excellent analysis of sequential macroeconomic interactions between economy and polity that result in cycles of policy-making, particularly in the evolution of foreign trade regimes.

The notion of policy determinacy which introduced this section is in large measure an in-house problem in social science, rather than a historical problem, and related to ambiguities in the concept of efficiency in theories of institutional change that assume universal optimization (Furubotn 1994). However, a world of incomplete information is not determinate: with variable and changing policy models there frequently is scope for new policy directions that are not motivated by fundamental changes in the political balance.

VI. Final thoughts on problems in the theory of structural policy

This final section discusses four issues that concern the design of institutional change. (1) the question whether social science now is ready to develop a general theory of policies for structural change; (2) a brief summary of new policy dimensions suggested by the control problem; (3) a discussion of policy models as intermediate targets of policy; and (4) a call for more careful examination of the policy implications of long-term path dependence.

(a) a general theory of structural change?

Institutional analysis emphasizes that the creation of wealth depends in a complex way on institutions, and institutions are rooted in the political and social domains. Before they confidently can plan major structural transformations (for instance, of a soviet-type economy into a secure market economy with low transaction costs), policy makers require a general theory of the relationship between the economy and other parts of the social system. Their model, then, would identify available policy instruments and required measures. At present, social science, fragmented into insular

disciplines, is far from providing such a workable comprehensive policy model.[25]

Major advances in social science, moreover, will not necessarily provide policy makers with the means to orchestrate substantial structural changes. New improved policy models might show that there exists no set of actors who (a) control instruments that are necessary and sufficient for successfully transforming the system, and (b) are willing to use the instruments to reach the targets in question (for instance, rapid economic growth). Advances in social science also may strengthen the hand of those who oppose change. If more becomes known about the explicit consequences of a change in the general rules of a social system (Buchanan's constitutional rules), it may become more difficult than before to agree on such changes, because Rawls's (1971) veil of ignorance has been pulled aside. A major system change affects people differently and usually encounters opposition in some quarters. A successful transition policy must find a strategy that overcomes opposition, which often is a formidable task, particularly when short-term costs of structural adjustment are high. (Dewatripont &

[25] The absence of a general theory of structural change is apparent from the response by economists to the transition in the 1990s of the former soviet-type regimes. Their natural response has been to focus on topics for which the training of economists provides comparative advantage. Benham et al. (1995) scan the economics literature for studies dealing with the transition to markets in Eurasia for the years 1989-1994, and find that standard macroeconomic issues (stabilization policy) dominate this subset of the economics literature. These studies usually assume that traditional models of macro stabilization also work in the transition environment. As for structural policy, the economics literature primarily is concerned with (a) formal schemes for privatization, and (b) the relative merits of shock-treatment versus a gradual approach toward privatizing assets and liberalizing exchange. The literature has little to say about deeper institutional issues, such as various dimensions of legal reform, or the structure of economic organization and public administration. The arguments for or against gradual change usually rely on casual theorizing about social and political factors (Murrell 1995). And little is known about how far transition economies can go in substituting private rules and private enforcement for a full-scale legal system.

Roland 1995). As it evolves and provides better strategies for institutional change, social science also may provide opponents of change with sophisticated instruments of counter-policy. More knowledge, therefore, can be a two-edged sword, unless conflict over structural policy primarily involves dispute over the effectiveness of different means to a common end, or, if advances in social science lower the cost to contending parties of make binding agreements about the distribution of the potential increase in wealth resulting from institutional change.[26]

(b) policy implications of control problems

The current strength of the new institutionalism is in partial or sectoral analysis, but less progress has been made in understanding the interaction between economy and polity, especially the long term dynamics. The key contribution of the literature has been to explain the logic of organization in terms of issues of control, and the costs of control, transaction costs. Various scholars (Milgrom and Roberts 1992; McMillan 1995; Williamson 1985) have studied control structures within organizations and in markets, and others have examined the logic of control structures in political organization and at the constitutional level (Mueller 1989).

Studies of control problems, such as information asymmetries, incredible commitments, moral hazard, and adverse selection, provide convincing explanations of why some institutions are relatively inefficient in terms of the wealth criterion, and what are the motives and predicament of those who maintain inefficient institutions. How such institutions could be reformed is less well understood, not only because of complex problems in political economy, but also because successful institutional change often seems to require a change in informal institutions on which public policy has limited influence.

The literature suggests various instruments that the state can use to lower

[26] In addition to advances in social science, technological change could lower costs of measurements and enforcement, and facilitate credible commitment and contracting. Consider, for instance, the new technology used to precisely monitor fishing vessels on the oceans.

transaction costs, for instance by providing stable standards of measurement in exchange, including stable prices, and generally by creating a solid macroeconomic environment; by credibly committing to honor ownership rights and avoid using state power to seize resources capriciously, and by following a stable and predictable policy of taxation (Weingast 1993); by protecting economic actors from each other through various means, including legal processes (Posner 1986); and by facilitating organizations that help establish reputation and detect fraud (Greif et al. 1994).

The role of private rules and private enforcement poses perplexing issues in the theory of economic policy (De Soto 1989). Recent empirical evidence shows that economic actors sometimes invent private mechanisms for strengthening control and lowering transaction costs when they encounter permissive regimes (China), or bureaucratic and inefficient states (Latin America) (McMillan 1995; Stone et al. 1996). Private control systems tend to be localized and limited in many ways, and it is not obvious that in the long run such arrangements will support a modern capital intensive integrated national economy and provide necessary foundations for long-term economic growth. There is also a question of political economy. The state may decide to foster or tolerate private rules and enforcement when these arrangements do not threaten dominant political interests, but private arrangements can create forces that challenge the political status quo, and it is uncertain how long they will be tolerated.

The structure of public control systems can vary according to the degree of centralization and how much authority is left with local government. While recognizing the need for coordination, the new information approach slants structural policy towards decentralization. Concern with the limits of central control is a recurrent theme in the literature on institutions (Ostrom 1990; Ostrom et al. 1993; 1994).

(c) policy models as intermediate policy targets

In addition to emphasizing control issues, the other critical policy lesson of the new institutionalism concerns the information issues that I refer to as incomplete and competing policy models. With incomplete models a new dimension is added to the theory of economic policy, because now actors have an incentive both to invest in

knowledge for improving their own models, and to persuade or assist other actors to change theirs. These concerns make policy models an intermediate target of policy. Whether the policy objective is a better design of an organization such as a corporation, or of an entire economic system, the idea of incomplete models weighs against great experiments and rapid implementation of structural changes, and suggests modest steps, incrementalism, and learning by doing.

With incomplete models, measures that aim at lowering the cost to actors who seek more knowledge become a powerful instrument of policy. In a closed society, policy makers who seek to increase the rate of economic growth dramatically can lower the cost of organizational (and technical) knowledge by opening the economy and facilitating international contacts through trade, telecommunications, direct investments, and educational exchanges. Although such measures may have profound implications for structural change, the actual outcome in a dynamic environment is inherently uncertain and generally cannot be modeled in specific terms as a formal relation between instruments and targets in a Tinbergen policy world.

Autonomous feedback mechanisms are crucial arrangements for selecting from incomplete and variable models those policy models that best meet the relevant criteria. In a well-functioning system, the feedback informs and punishes actors who rely on models that produce outcomes which conflict with, policy goals. The classic example of such impersonal arrangements is the competitive market which selects from competing firms the ones that have lowest costs (Alchian 1950). Empirical evidence from various parts of the world, such as China, indicates that not only firms based on exclusive private ownership but also various hybrid forms of organization often operate relatively efficiently in a competitive environment (McMillan & Naughton eds. 1996). The evidence hints that the same structure of firms may not be suitable for all communities because of differences in informal institutions, which suggests experimentation and a selection process for countries that attempt to introduce decentralized economies.

The feedback from competition also constrains political units. If the members of agricultural cooperatives operated by local governments easily are able to exit and join

more desirable cooperatives (or private firms) in other localities, poor management is likely to trigger corrective feedbacks and compel polities that are losing population to revise their policy models or targets. Similarly, free entry and exit can discipline higher political units such as the states in a federation, as Weingast (1995) has shown in his work on market-preserving federalism. With easy entry and exit, federate states, which set goals or employ policy models that yield relatively low standards of living, will lose population and resources unless they reform and revise their policy models or targets (assuming that laggards are not able to persuade or force the federation to adopt their inefficient policies)

The idea that governments sometimes design institutions for constraining and disciplining themselves is far removed from the old theory of economic policy and raises questions about rational choice. The classic 'weakness of will' argument could be behind decisions of rulers to impose such self-constraints, who then behave somewhat like a heavy drinker who locks up the liquor and gives the key to a trusted friend or throws it away (Elster 1989). In political terms, disciplinary mechanisms can serve as a commitment device that guarantees against free riding by members of a coalition.

(d) pathological path dependence

Institution building with incomplete models implies that often there will be lengthy lags between the initiation of structural policy and the time when relevant actors have the new structures right. It is reasonable to expect, for instance, in a transition from a planned economy to a market system, that public and private actors need some time to experiment and learn before they master how to design and operate the organization of a modern market economy, including financial, manufacturing, legal, and government organizations. And successful experimentation requires that the basic institutional framework provides the actors with the appropriate incentives.

Few social scientists doubt that structural change involves substantial lags of learning and adjustment, but recently the institutional literature has introduced far more dramatic lags which are related to increasing returns, network externalities, lock-ins, and *path dependence* (Arthur 1994; David, 1993, 1994; North 1990). The path

taken generally is not predetermined, but usually one of many possible outcomes in process with multiple equilibria, where small or even chance event cause the selection of a particular equilibrium or path (David 1993; 1994; Arthur 1994). Initially, the concept of path dependence was applied to historical choices of particular technologies and resulting lock-ins (Arthur 1989), but later these concepts were extended to include social institutions, especially informal institutions and related mental constructs, which I label private policy models in this paper (North 1990; Denzau and North 1994). Recently, a few scholars have argued (a) that some communities which share specific private policy models (and related informal institutions) will resist public policy measures aimed at lowering transaction costs and increasing efficiency; and (b) that these models are extremely durable, enduring sometimes for centuries or even a millennium.

Putnam (1993), in his well-known study of the effects of the 1970 reforms in regional administration in Italy, explains regional variations in the success of the reforms with differences in social capital, and traces the roots of perverse policy models to 12th century Italy. Avner Greif's (1995) work on the different response of Genoa and Venice to historical opportunities in trade during the Commercial Revolution also shows different paths of varying success. For Russia, Hedlund and Sundström (1996) trace perverse policy models to the Middle Ages and hint that attempts in the 1990s to reform the Russian economy and society may fail because their cultural roots predispose Russians to authoritarianism, and alternative systems may not succeed but give rise to anarchy.

The theory of social path dependence is still fragmentary and incomplete, and I refrain here from evaluating these theoretical and empirical insights. But the implications of the strong version of pathological path dependence for structural policy potentially are devastating and can be compared to the discovery of debilitating genes in specific human groups. These (alleged) impediments, I repeat, are unrelated to the conventional lags associated with building infrastructure, raising the levels of education and skills in the population, and designing and testing new organizations. To my knowledge, the new institutionalism has not proposed any instruments or measures for

escaping pathological path dependence, which introduces a new type of policy determinacy. If one were to select the single most important policy implication of the new institutionalism, it is the notion of reform-resistant path dependence that endures for centuries. Scholars, who believe that the empirical and theoretical evidence supports the notion that some societies for generations or centuries are locked in a perverse policy world (which still is controversial among the new institutionalists), should make the phenomenon the focal point of their approach to structural policy, with the ultimate aim of developing policy models and instruments for coping with destructive path dependence.

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