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PUBLIC CHOICE THEORY: A NEW APPROACH TO
INSTITUTIONAL ECONOMICS*

by

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The primary preoccupation of public choice theory has been with non-market decision making and thus with public choice, not market choice.

Economists have always recognized that market institutions are subject to serious limitations and that an array of goods and services will be supplied through instrumentalities of government in one form or another. Unfortunately, institutions of government are also subject to institutional weaknesses and failures. Reliance upon governmental authority to correct for problems of market weakness need not lead to an improvement in welfare.

References to market institutions, to governmental institutions and to problems of institutional weakness and failure suggests a preoccupation in public choice theory that is akin to the work of institutional economists.

The kinship in interest is, however, accompanied by substantial disparity in method. Contemporary public choice theorists are more likely to be grounded in the micro-economic theory associated with the Chicago School than in the work of the traditional institutional economists.

Whether public choice theory represents a major advance in institutional analysis will depend upon whether the new approach provides a methodology for the comparative study of institutional arrangements that take us beyond

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the earlier institutional economists. The task is accompanied by a number of difficulties that need to be acknowledged. In examining these difficulties I shall focus upon some of the basic elements in public choice theory that point to some problems involved. These elements include 1) methodological individualism, and 2) the nature of goods as these relate to implications for institutional design.

Methodological Individualism

A basic presumption in economic reasoning is that all choices are made and actions taken by individuals who weigh costs and benefits, or advantages and disadvantages, in relation to alternatives that are available to them.

Methodological individualism implies that analysts rigorously and persistently use a language that comes back to individual persons as decision makers.

The work of the earlier institutional economists would be criticized by many public choice theorists on the grounds that their use of language too frequently abandoned methodological individualism and painted sweeping word pictures of human societies as a whole.

The development of an analytical language that makes rigorous and persistent use of methodological individualism is plagued by two major difficulties. The first is that of stipulating a model of man that will provide an appropriate definitional referent in using individuals as the basic unit of analysis. The second difficulty is shifting the units and levels of analysis to take account of jointness of effort and interdependence of actions among aggregates of individuals.

Assumptions About Human Conduct

Homo sapiens through their use of language are endowed with a cultural

inheritance that is variable in time and place. The information or knowledge that forms a part of this cultural inheritance significantly affects the opportunities and the strategic possibilities for choice that are available to individuals. Traditional assumptions about individuals as used in a theory of market choice cannot be applied as easily to non-market decision making. Time horizons in constitutional decision making, for example, are of radically different magnitudes than the time horizons involved in market decisions. Assumptions about certainty and risk are less tenable. Problems of uncertainty, fallibility, and error will assume greater magnitudes. The acquisition of information will be a variable that is subject to economic calculations under conditions of uncertainty. Under such circumstances, learning and the generation of new knowledge become a characteristic of individual human behavior which may transform the range of opportunities that are available and the way that preferences are ordered among sets of possibilities.

Assumptions of fallibility, uncertainty and error proneness greatly restrict the rigor of deductive inference. Reasoned inference and conclusions are still possible as Gordon Tullock has demonstrated in his efforts to fashion a theory of bureaucracy upon a simple set of assumptions about individuals seeking to advance career opportunities within a bureaucratic organization. Tullock derives loss-of-information and loss-of-control functions which enable him to generate conclusions about systematic tendencies toward goal displacement and "bureaucratic free enterprise" in large-scale bureaucratic structures.

Institutional Variables in Shifting Units and Levels of Analysis

While individuals may be regarded as the basic units to be taken into

account in decision-making situations, they usually act within a social milieu that takes account of the interdependent interests and actions of other individuals. Much of market behavior involves individuals who function in production teams organized as business firms rather than individual proprietorships. If the firm manager is viewed as a single sovereign seeking to maximize profit, the assumptions applicable to purely individual conduct can be ascribed to the firm without too much difficulty. But to treat firms as though they were individuals obscures the problem of specifying the structure of authority relationships which both constrain some possibilities and create incentives to pursue other possibilities. These structures of authority relationships become the compositional or relational rules for transforming patterns of individual behavior into joint, interdependent relationships that take on characteristic patterns of organized social behavior.

Market conduct, for example, is organized by reference to specifiable rules of the game which can be stipulated in relation to the distribution of income, the structure of property rights, terms and conditions for entering into binding contractual agreements, and the constraints that apply to unlawful conduct. Those are the rules that establish terms of trade and specify limits to market relationships.

Patterns of authority relationships within the business firm may vary substantially from the patterns of relationships that are characteristic of market conduct. In turn market conditions in a highly regulated monopoly structure will vary substantially from a highly competitive, open market arrangement. The structure of authority relationships both within the firm and within the product market represent two different simultaneous games which affect the patterns of conduct and performance in particular industries.

Specifying the structure of authority relationships for ordering social relationships requires explicit attention to institutional variables. Extending an analysis to non-market decision-making arrangements requires a specification of essential relationships and constraints that apply to non-market conduct. Tullock's theory of bureaucracy specifies a set of institutional incentives and constraints that are quite different from those which would be found in a market structure where individuals were free to trade with one another to each other's advantage. Instead, superiors were assumed to dominate the career opportunities for subordinates within a given organization.

Unless analysis is constrained by an arbitrary law and order assumption the specification of relevant structures of institutional arrangements can become extraordinarily complex. The rules for the play of a game within a team will be quite different than the play of a game among teams. Whether those rules are effective in ordering conduct depends upon the availability of refereeing or enforcing arrangements. Unless those are assumed away, patterns of enforcement need be expressed in probability terms. We are then confronted with the task of specifying interdependence among institutional structures on an assumption that a move or a choice of strategy in one game can be potentially viewed as a simultaneous move in a series of other games.

As public choice theorists focus upon non-market decision making their success in positive analysis will depend upon their capacity to specify rules and relationships which order social behavior in specifiable ways. Presenting the logical implications of rules and relationships for specifiable units and levels of analysis will be a major task. No single theory of teams or of coalition formation will be appropriate to all decision-making arenas. The games of war, electoral politics, business competition and of adversary litigation involve quite different patterns of conflict, competition and

cooperation within and among teams of varying configurations.

By explicitly specifying the rules and relationships which facilitate and constrain the choice of strategy on the part of individual actors, public choice theory may be able to avoid the creation of models of man that differentiate "economic man" from "organization man" or "political man."

Instead we might anticipate how the same individual is led to pursue different strategies by the structure of incentives created in the rules and relationships stipulated by different types of institutional arrangements.

The same individual functions as an economic man, organization man or political man depending upon the games of life that he plays in varying institutional settings. A general model of man can be used if the institutional context is more explicitly characterized and institutional variables are explicitly identified as affecting the structure of opportunities and the choice of strategies in different units and levels of analysis.

If public choice theory can 1) maintain a strong and explicit commitment to methodological individualism, 2) specify the compositional and relational rules associated with joint efforts or teamwork and 3) specify the patterns of interaction that apply among teams in different decision-making arenas, we may be able to proceed with step-by-step increments to the analysis of institutional behavior rather than commenting about aggregate structures of institutional arrangements in general. When analysis shifts to different units and levels we need to be quite explicit about those units and levels of analysis if we are to make comparisons where similarities and differences can be explicitly accounted for. Otherwise it becomes impossible to account for what differences institutional arrangements make in ordering social conduct and how these patterns of conduct affect the well-being of those who function in different institutional structures.

The Nature of Goods

Perhaps the most important element in public choice theory has been an explicit effort to identify characteristics of goods which are associated with differential institutional arrangements for organizing economic efforts to yield an advantage through joint action. The task has been one of differentiating marketable goods and services from those which are not subject to market provision and require recourse to non-market institutions to secure their provision. The degree of success or failure in this effort will probably be the critical factor in establishing the net contribution of public choice theory to institutional analysis.

Economists have long identified exclusion as being an essential condition of market organization and the absence of exclusion as a condition evoking market failure. Jointness of use, non-subtractability of consumption, measurability of outputs, and durability of a good or service are some of the other attributes, apart from exclusion, that bear upon efforts to distinguish the nature of goods and services.

Exclusion implies that a vendor can deny a potential buyer the use of a good or service unless he is willing to pay a price. Jointness of use implies that a number of individuals will simultaneously enjoy the benefits or endure the costs that are associated with some set of events which can be conceptualized either as a "good" or as a "bad." Reducing the costs of a bad which would otherwise be endured is the equivalent of enjoying the benefit of a good. On the basis of these two considerations -- jointness of use and exclusion -- a provisional definition of a public good or service is one that is subject to jointness of use where exclusion is difficult or costly to attain.

Jointness of use or consumption does not foreclose the possibility that partial exclusion can be attained for some goods and services. A theatrical production is jointly enjoyed or consumed by an audience but exclusion can be attained in admitting only those who pay a price for admission. The same principle can apply to toll roads and to jointly used goods or services subject to user charges. My colleague Elinor Ostrom has referred to such goods as "toll" goods. Toll goods typically involve an element of choice for the potential user as against a no-choice circumstance that may apply to individuals in many public-good situations.

Where jointness of consumption occurs and exclusion cannot be attained an open question remains about the size or magnitude of the field of effects associated with events that can be identified as a potential public good or service. Boundary conditions characteristic of such events may be more or less precise or ambiguous. The boundary conditions that apply to watersheds, for example, are easier to establish than boundary conditions for atmospheres or micro-climates. Man-made conditions such as the provision of law and order, the aesthetic quality of an urban landscape or other types of public goods and services may be differentiable over a larger domain but subject to an undifferentiated jointness of use or consumption within a smaller domain. So long as the Tiebout option is available, the choice of a residence among differentiated neighborhoods may be similar to an admission charge for a toll good.

Another characteristic of events which are treated as goods or service is whether use or consumption by one individual exhausts the utility of a good and precludes its use or consumption by other individuals. The definition of consumption in market economics is usually based upon a stipulation that consumption by one precludes consumption by others. Samuelson's initial

efforts to conceptualize a public good turned critically upon non-subtractibility of consumption. A public good is one where use or consumption by one does not subtract from its use or consumption by others. The marginal cost of the additional user or consumer is negligible or zero and each individual has equal access to the use or enjoyment of a public good.

These conditions may apply within thresholds but the case of a purely public good characterized by complete non-subtractibility of consumption is difficult to imagine. John F. Dales, for example, has commented that gravity is the only case of a purely public good that he can identify. Perfect non-subtractibility in consumption may imply that no effort need be made to secure such a purely public good.

The disconcerting problem for a public economy is where jointness of use or consumption occurs under conditions of partial subtractibility. At some threshold of supply, use by an additional person or for an alternative type of use may impair the value of the good for other users or alternative types of users. The condition of partial subtractibility when aggregate demands exceed the threshold of supply can lead to an erosion or degradation in the quality of a public good or service. Conditions of partial subtractibility imply that jointness of use gives rise to potential conflict as among uses and patterns of use. The resulting impairment of use generates "pollution," "congestion," or an "erosion" in the qualities of life.

These characteristics of public-good situations might be extended by a consideration of other attributes including measurability, durability, and other similar characteristics. The problems of measuring a good and service where exclusion is difficult to attain and consumption is subject to partial subtractibility is too well known to persons familiar with public-good problems to pursue in the limited time and space constraints available for

this discussion. When consumption or use of a service occurs simultaneously with its production the capacity to differentiate an output or a product from the production process is also difficult to realize. Monitoring the performance of those who supply police services, for example, poses difficulties because of the non-durability of the service and the problems of measuring the output.

Public choice theory has only begun to cope with the essential conceptual problems in characterizing the nature of goods. Ideal type formulations for specifying purely private and purely public goods are likely to apply only to a few trivial cases or to null sets. Instead we might view attributes such as exclusion, jointness of use, domain, substitutability of consumption, measurability, durability and other such characteristics as variables where more or less of any given attribute or combination of attributes might be specified. We might then arrange specifiable goods on a continuum between purely private and purely public. The presence or absence of certain attributes or characteristics might be viewed as creating opportunities or posing problems that are subject to variable solutions. With all of its limitations public choice theory is, nonetheless, highly suggestive of implications for different possibilities that might be pursued in the design of non-market institutional arrangements in a public economy.

Implications for Institutional Design

Mancur Olson in his Logic of Collective Action has indicated that where a public good is subject to joint consumption and where exclusion cannot be attained we can anticipate the failure of a solution that depends entirely

upon voluntary agreement among the individuals involved. Each individual within the relevant domain will, by definition, be able to enjoy the benefit of whatever good is secured by natural provision or by the efforts of others. If expenditures are required to modify the supply of such a good, some individuals will have an incentive to take advantage of whatever level of good is freely available and to minimize costs by withholding his own contribution to the joint efforts. Unless the community of beneficiaries is sufficiently small to be able to coerce one another and to keep account of each other's contribution to the common good, individuals will have an incentive to follow the example of successful holdouts and an unsatisfactory supply of public services will be provided. The community of individuals will suffer deprivations from the failure to supply a public good of potential benefit to each member of the inchoate community.

Given the probability that purely voluntary efforts to supply a public good will fail, rational individuals would then be lead to search out non-voluntary solutions which would enable the community of potential beneficiaries to procure a joint good while minimizing their potential costs in so doing. If we assume that public goods come in different sizes and shapes, Olson has formulated a "principle of fiscal equivalence" to indicate that the boundaries of a jurisdiction to procure a public good or service should be drawn to take account of the relevant structure of events so that potential benefits and potential costs for the potential community of users can be internalized within a given domain. If appropriate boundaries are drawn, if the assessment costs are proportioned to benefits received, and if benefits exceed costs each individual would have an incentive to support an arrangement where each individual is foreclosed from functioning as a holdout or freerider and coerced to pay for his fair share of the joint effort.

Buchanan and Tullock have developed a cost calculus that can be used to conceptualize the problem of constitutional choice in organizing a collectivity to provide a public good. The choice of constitutional decision rules would stipulate the conditions that would apply to the taking of enforceable collective decisions so that expected interdependency costs would be minimized in relation to the net benefit to be derived from the provision of a public good or service.

A whole series of problems in the constitution of a collective enterprise to procure the supply of a public good or service can be spun off. The domain of the good needs to be related to the territoriality of jurisdiction. The particular type of good needs to be related to the scope of jurisdiction. Powers of taxation and of eminent domain are required to solve the holdout or free-rider problem. In the presence of coerced pricing and relaxation of the rule of unanimity, alternative decision-making mechanisms need to be established to articulate user preferences and to aggregate those preferences into collective decisions about the quantity and/or quality of the public good or service to be provided for the community of users.

The essential difficulty in dealing with public goods is jointness of use or consumption where the failure of exclusion permits potential free-riders or holdouts. The essential problem occurs in organizing the consumption side of economic relationships. Establishing conditions of territoriality, scope of jurisdiction, taxation, voting, representation and aggregate decision-making authority and the capacity to authorize provision for a given quantity or quality of public service are all aspects that bear upon collective consumption functions.

Any collectivity that is organized to perform collective consumption functions then faces an independent question of how to arrange for the

production and delivery of a public good or service. Among the options it might pursue is to develop its own production team and supply the service through its own production efforts, contract with an independent producer, who might be private vendors or another public agency, or a combination of both possibilities. A collectivity might rely upon its own production team to supply some components of a service and enter into contractual and cooperative arrangements with private vendors and other public producers to supply other components of a service.

By distinguishing collective consumption units from production units it becomes possible to anticipate the development of quasi-market conditions in the relationships among the different units of a public economy. The quasi-market conditions are created by the contractual arrangements among collective consumption units and independent production units and by competitive rivalry among potential producers. Scale conditions that apply to the organization of collective consumption units may vary radically from those that apply to production units. A user of interstate highways, for example, might gain an advantage in acting through a national government as the most appropriate collective consumption unit. It is an independent question as to what size of unit is most efficient in building and maintaining interstate highways given variable geographic and climatic conditions.

Multiple agencies, fragmentation of authority and overlapping jurisdictions may as a consequence of these considerations be more responsive to diverse preferences and supply services more effectively for any given level of expenditure than where a fully integrated unit of government becomes the sole supplier of public goods and services. We might expect alternative institutional arrangements to be appropriate for public sector organization. In the absence of enlightened and benevolent leadership we

might also expect public monopolists to be as self-serving as private monopolists.

These arguments can be extended in a variety of different directions.

The essential point is that public choice theory enables us to derive quite different solutions to the problem of public sector organization than has been derived from the traditional principles of administration used by students of public administration to analyse problems of public sector organization. The application of economic reasoning to non-market decision making has in effect provoked a paradigmatic challenge to those fields of scholarship which have been centrally preoccupied with non-market decision making. The challenge impinges directly upon students of public administration and of political science more generally.

Where we have theories that lead to contradictory conclusions the choice of theory to guide future work depends critically upon whether evidence consistently supports one or another contention. Work in public choice theory must now be complemented by empirical investigations where contending hypotheses can be tested for their predictive value. A whole new generation of research will be stimulated by this paradigmatic challenge.

The challenge inherent in public choice theory may also lead to a basic reassessment of the implications that have followed from political reform and reorganization efforts that have been attempted over the past several decades. Problems associated with the so-called urban crisis, with crime in the streets, with the performance of local government services more generally, and with the contemporary constitutional crisis over executive authority may all have been exacerbated by inappropriate reform and reorganization efforts. A positive theory of public choice is a necessary condition for undertaking reform or reorganization efforts which will

evoke the intended consequences. Otherwise, reasoned choice cannot be used to inform political decisions.

Public choice theory also provides a basic link in going beyond 20th century scholarship and rediscovering the use of methodological individualism and economic reasoning in 17th, 18th and 19th century political thought.

The work of Thomas Hobbes, for example, is thoroughly grounded in methodological individualism and economic reasoning as applied to the problem of constitutional choice. Alexander Hamilton and James Madison draw upon the same theoretical foundations to introduce new conceptualizations and to derive quite different solutions than Hobbes was able to derive. In some ways Hamilton and Madison go well beyond the Buchanan and Tullock formulation to conceptualize the conditions that are necessary for the maintenance of an enforceable system of constitutional law. Hobbes had considered the maintenance of an enforceable system of constitutional law to be a logical impossibility or absurdity. Alexis de Tocqueville, both in Democracy in America and in The Old Regime and The French Revolution relies upon the same methods of economic reasoning to conduct his comparative analysis of institutional arrangements in France and the United States.

Public choice theory thus provides a major paradigmatic challenge to 20th century scholarship concerned with the study of government and public administration. At the same time public choice theory provides a link to much earlier work in the study of political economy before economists became preoccupied with market structures and political scientists became preoccupied with governments as their basic unit of analysis. If we can combine both the old and the new we may have the elements for an institutional economics that lays the foundations both for a positive analysis of human institutions and for the design of human institutions on the basis of reasoned choice.

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