MODELS FOR SOCIAL AND URBAN INDICATORS: TOWARDS AN INTEGRATED THEORY OF POLICY ANALYSIS*

Harvey A. Garn, The Urban Institute
Michael Springer, The Urban Institute

I. INTRODUCTION

In this paper we will describe a set of analytic models developed to structure the applied research being conducted by the Social and Urban Indicator Program of The Urban Institute. The distinction we draw between applied and basic research is not the distinction sometimes made between "practice without theory or theory without practice." Indicators are meant to convey information, not simply to repeat numbers. Therefore, in both applied and basic work some inference structures are required in moving from data to information. The relative neglect of conceptual structure has been, in our view, one of the major defects in applied work rather than being a necessary part of it.

The distinction we wish to make in describing our work as applied is that our research takes its origin in the problems of those choosing, operating, and being affected by public policies rather than that research which derives from knowledge aspirations typically associated with individual academic disciplines. Those pursuing the latter type of research may or may not intend that their results will be useful to those making and being affected by public policy. In applied research, as we define it, possible utilization of the outputs of the research by these individuals and groups is a major criterion in choosing what to do. In this context, therefore, it is necessary to form some judgments about the public policy scene and the customary modes of policy analysis and evaluation. Prior to describing our approach, some general comments about these matters seem relevant.

There are many indications that the American people are passing from the relatively easy acceptance of the expansion of public programming and action which characterized much of the 1960's into a more skeptical mood. There are indications that major concerns with, for example, improved health, housing, education, public safety, and employment have not been resolved or perceptibly ameliorated by the programs and policies which were established. Responsibility for outcomes seems diffuse and accountability correspondingly difficult to establish. Indeed, mea culpa has become almost a password among those who have proposed, administered, and analyzed policies and programs, but there are few signs of positive motion to create new and better initiatives. Some analysts, in fact, take the view that nothing or very little can or should be done through public intervention. At the same time, those who have been purported beneficiaries of social programs have not been exceptionally eager to come forward in a concerted defense of the programs.

This situation presents a very complicated mixture of opportunities and difficulties for those who wish to develop improved ways to enhance public well-being. On the one hand, the increased public skepticism may make possible serious debates about the scope, structure, mix, and efficacy of public policies and programs. It may result also, of course, in a withdrawal from public purpose. The outcome of the current public mood depends, in considerable part, on whether or not information relevant to policy choices and concerns can be developed in a sufficiently structured way to make such debates not only serious (that is, motivated by real concern) but productive of useful initiatives.

In short, we have come to the point where we now have to wrestle seriously with the confusion, frustration, and failure that are part of the legacy of the policy approaches of the 1960's. This puts a heavy burden on those who provide the analytical basis for policy choices and evaluation to develop conceptual structures appropriate to the potential seriousness of the debate. Such conceptual structures must be responsive to at least some of the common elements discernible in the lessons of the recent past. Among the lessons we would note are:

- Citizens diverge significantly in what they mean by "safe streets" or "quality education" or "good health" and are raising important questions about what should be produced and how it should be distributed.
- Improvements to the quality of life can no longer be viewed as the sole responsibility of government agencies or private organizations but must be achieved in concert with primary social units--families, neighborhoods, and communities.
- The delivery of public goods and services not only involves the provision of outputs, but also includes opportunities and constraints for people to use these outputs to enhance their own welfare.
- To increase responsiveness, the incentive structures of organizations and institutions involved in the delivery of public goods and services must reflect the values of their customers/clients as well as those that flow from the internal problems of management.
- No delivery system for particular goods and services--the police, a federal agency, or city government--does or can control either the perception and use of these goods and services by consumers or the full range of other outputs which contribute to welfare outcomes.
- Policy is implemented through large agglomerations of public and private organizations, professional associations, political units, and social groups. The capacities of these implementation systems

*This analysis was supported by funds from The National Science Foundation's Special Projects Program under Grant No. GS-38613. Opinions expressed are those of the authors and do not necessarily represent the views of The Urban Institute. The analytic models reported on below were developed by our entire research group which also includes Michael J. Flax and Jeremy B. Taylor.

are affected by complex patterns of interactions in geographic space and through institutional structures.

Virtually no one individual, group, or institutional representative commands sufficient information or resources to pursue effectively optimization or maximization strategies, although they can behave more or less functionally given their objectives.

These "lessons" have important implications for the ideas, notions, and analytical constructs employed in policy analysis and evaluation. We require intellectual tools that are sensitive to the fact that the United States is a highly pluralistic society having a great diversity of social and political values. We require tools that, for the sake of manageable analysis, do not make facile or misleading distinctions between political and administrative issues or between public and private spheres of activities, and which recognize the differences between institutional imperatives and those interests that stem from clients or citizens to be served by these institutions. Finally, we require tools that are sensitive to the fact that any given set of decision makers can make only modest contributions to improving the quality of life.

It is important then to have a sense for whether or not existing policy analysis models have these characteristics. The great majority of current conceptual models commonly used in policy analysis come from some aspect of economics, operations research, political science, management science, and organization theory. Policy analysis based upon economics and operations research focuses on the relationships between the inputs and outcomes of policy, but tend to treat implementation and organization only sketchily.[1] Analyses based upon political science approaches focus attention on political conflict and the overall structure of governmental processes, but tend to ignore how these processes affect the kind of outcomes or relationships between inputs and outcomes that are the basic information used by economists and operations researchers. Management scientists and organizational sociologists when they address policy issues tend to focus attention on intra-organizational issues related to decision-making processes and bureaucratic structure, but have not established analytical links between these phenomena and outcomes from the client/consumers perspectives or the divergent values and conflict the political scientists seek to understand.[2]

It may appear that this is an argument for organizing more multidisciplinary research. In a sense this is true; but another lesson from the recent history of policy analysis and evaluation is that such research cannot solve the problem if the representative of each discipline pursues the application of his own paradigms supplemented by a concluding or introductory statement by a grand summarizer. Rather, the requirement is for the development of bridging paradigms which representatives of different disciplines can learn and use. What we have in mind is a theoretical framework that defines important relationships between the key conceptual and methodological concerns of several research traditions. Such sets of bridging paradigms would allow for the effective integration of discrete pieces of analysis conducted within the narrower bounds of several disciplines as well as for the conduct of joint research within a framework that combines the analytic power of several disciplines. Additionally, the set of bridging paradigms can provide a common language for a heterogeneous group of analysts.

Beyond the development of a set of bridging paradigms, it is our perception that conceptual understanding of public policy programs and their effects requires also a constant balancing act between those who feel that differences in values, roles, and activities of people are so great that there is no hope for systematic analysis and generalization and those who feel that the assumptions required to convert scattered observations into systematic models (particularly those built on assumptions of maximization behavior and equilibrium) are both "true" and "complete" descriptions of the phenomenon under study. In executing this balancing act, one tends to be confronted with two not entirely satisfactory alternatives at the extremes. One can draw upon a bounded and well-developed set of intellectual constructs from a particular body of academic knowledge such as organization theory or microeconomics. Such conceptual frameworks quite clearly allow for ordered and systematic formulation and analysis of issues or problems. The virtues of these constructs for academic research--a parsimonious set of assumptions and a focus of a limited range of variables--tend, however, to be a liability for much applied analysis. By encompassing a carefully delimited range of variables, consideration of crucial interactions is often beyond the scope of analysis. The very neatness and elegance of conceptual models often conveys the impression of far greater certainty than is warranted.

The case study approach is often preferred as a means of avoiding these errors. When well-executed, these richly detailed descriptions of processes or problems can convey a wide range of important interactions as well as the complexity and ambiguities of real-world situations. Such case study approaches, however, simply do not provide a framework for the ordered formulation of questions, or for systematic analysis. In effect, they provide no reliable means for the accumulation of policy-relevant knowledge.

Consequently, a more appropriate framework to address policy and program issues should embody several important characteristics. First, it should integrate those analytic perspectives that have demonstrated a particular capacity to address important aspects of policy considerations. In this regard, it should encompass some of the key paradigms and concepts of microeconomics, political science, and management science. Second, while it should be sufficiently detailed to capture the flavor of a complex reality, it should provide also a framework to structure systematic analysis. Finally, it should assist in the ordered consideration of policy issues by public officials and citizens and for the translation of their perceptions of these issues to researchers and analysts.

Much of the recent work of the Urban Institute's Social and Urban Indicators Program

is an attempt to achieve such a conceptual structure.[3] We recognize, of course, that there are many others approaching similar issues from a variety of perspectives. We will claim, therefore, neither exclusive validity nor completeness of our approach. We have found, however, that it is suggestive of a wide range of potentially useful applications in a context where no approach to policy analysis and evaluation based solely on the restrictive and highly formalized models of a single discipline seems adequate.

In establishing the major features of such a framework, we began with an elaboration of a traditional microeconomic model of production processes. Our model traces chains of interactions from resource inputs to outcomes in terms of the level of human welfare through two structurally independent transformations--the transformation of resources into goods and services by production units, and the subsequent transformation of the characteristics of the goods and services by consumers into various welfare outcomes. This model allows us to explore questions pertaining to the role of consumers in the generation of their own welfare and to specify important differences between the production and consumption of goods and of services. Next, this model is integrated with schema that identify important bureaucratic and political roles and institutional patterns. These roles and institutional patterns are viewed as influencing the generation of welfare by structuring the uncertainties associated with the purposive choices that must be undertaken in the processes of both production and consumption. This allows us to systematically address the information requirements of different kinds of decision makers as well as deal with the impacts of both incentive systems and institutional structure on either social or institutional performance. Our third extension involved an adaptation of the theory of economic clubs in order to place considerations of institutionalized production, consumption, and welfare generation in a spatial context. In this model, the processes and problems of urban growth are treated through a simultaneous consideration of the spatial behavior of producer and consumer groups and the geographic and organizational structure of governmental activities.

Implicit in the development of all of our models is that choices are not and cannot be made in a manner that allows for the maximization or optimization of a set of values. Rather, we believe the decision makers are confronted by large areas of uncertainty based not only on complexity and limited information but also on the slack and disequilibrium which tend to characterize both large-scale systemic relationships and relationships within small groups and institutions.[4] Therefore, we agree with those organizational and political theorists who argue that rational decision making involves sequences of learning about problems and searching for solutions in order to reach an incremental decision that achieves results that are at least satisfactory in terms of some set of objectives.[5] Our models are intended to facilitate these searching and learning processes by providing a broad and detailed analytic framework that will assist in the conceptualization of problems, the specification of crucial relationships, and the identification of lucrative questions for further research.

II. THE GENERATION OF WELFARE - FROM INPUTS TO OUTCOMES

Our initial model grew out of dissatisfactions with conventional microeconomic models of production for tracing chains of interactions from resource inputs to final outcomes in terms of the quality of people's lives. Such schemas often present the policy maker and the researcher with huge analytic gulfs between the level and mix of resources entering into a production process (such as the number of students per teacher, or the number of hospital beds per capita) and welfare outcomes (such as the rate of learning or the level of morbidity). We observed, also, that problems of this character are far more acute in assessing the production of services than of goods. The outputs of goods production are tangible, are easily counted, and can be associated readily with a mix of resources having market prices even though the welfare outcomes of their use are far from clear. The outputs of service production are not only intangible and tend to be perceived differently by various actors, but also are partially determined by the client or consumer. Additionally, relationships between the characteristics of services and resultant outcomes are particularly tenuous.

After attempting to address these problems with the development of increasingly intricate elaborations of a standard economic model of production, we came to realize that our difficulties rested in large measure with the analytic assumptions of our model. Specifically, economic treatments of consumption have tended to ignore the contributions of consumption units--individuals, households, communities--to the generation of their own welfare.[6] We believe a more complete examination of the roles, values, and activities of consumers can help bridge the analytic gap between the outputs of production systems (the frequency of police patrols or the number of new housing units) and the welfare of citizens (the rates of victimization or the level of satisfactions with homes and neighborhoods).

Work being done on the economics of household production and related areas of consumer theory provided a useful starting point in our elaboration of the standard microeconomic model.[7] In this research, the household (or individual members of a household) is viewed as a production unit which combines market and nonmarket goods and services to produce various commodities. Researchers in this area of inquiry examine, for example, how households combine formal educational services with time spent with children to produce levels of learning. There are four key notions that are central to such analysis: (1) welfare outcomes of production can be different because of the activities of consumers, (2) these outcomes are different because consumers select different bundles of goods, (3) the efficiency of these selections can be constrained by the information about the price and availability of goods available to the consumer, and (4) goods themselves do not directly provide utility to the

consumer. They possess characteristics that give rise to utility.

In extending these notions, we assume that the relevant characteristics of goods are more than technical in character (that is, determined solely by the good). The characteristics of goods and services are assumed to be a function of consumer as well as producer behavior. The consumer actively shapes the characteristics. Thus, treatment of consumption efficiency is not limited solely to an examination of the information available to the consumer. It entails the broader question of the character of consumer technologies in converting characteristics of goods and services into satisfactions, a process directly analogous to technologies of production in converting resources into goods and services. Further, certain commodities (primarily service outputs) must be viewed as the products of the joint activities of producers and consumers.

The above assumptions help provide us with a schema having three significant features: (1) consumption and production are viewed as analogous but structurally independent activities; (2) analysis of goods and of services requires different sorts of analytic treatment; and (3) consumer satisfaction can be both extrinsic and intrinsic to the processes of consumption.[8]

Central to our schema is the notion that human satisfactions--the level of welfare or illfare--are the result of two structurally independent classes of purposive activities; the highly institutionalized activities by producers to transform a mix of resources into goods and services, and the subsequent and less institutionalized efforts by consumers to transform these goods and services into human satisfactions. Thus the outputs of production systems are treated as inputs to consumer transformation processes, in which consumers combine the characteristics of these outputs and transform them into their satisfactions (utility). Production system outputs do not directly provide satisfaction to consumers. Given that consumers may identify different characteristics in goods and services and employ different technologies in their consumption transformation processes, it follows that one cannot assume that the equivalence of a bundle of goods (or income) necessarily leads to an equivalent level of satisfaction for two consumers--even if they have identical tastes.

The schema is constructed in such a way that issues relating to the use of normative resources, such as values and sentiments, as well as traditional economic resources can be treated. In addition, the treatment of opportunities for or constraints upon production and consumption activities and the delineation of the differences in the interests and roles of producers and consumers are designed to permit the inclusion of variables relating to patterns of social organization and the sources of social conflict.

We have noted that traditional economic models treat the production and consumption of goods more adequately than the production and consumption of services. A primary reason for this is that production and consumption of goods are generally separated from each other in space and time. Also outputs of the production process are tangible and they usually have market prices.

Services tend to have different characteristics. Frequently the service delivery occurs in a face-to-face situation and depends on the direct interaction of the ostensible deliverer of the services and the receiver of the services. Outputs are not tangible and may not have a market price.[9] Thus, our schema views the outputs of service activities to be the joint products of consumption and production transformation activities. In the case of goods, joint products (somewhat analogous to investment) when present result from the interaction of the characteristics of goods with the transformation activities of consumers rather than from interaction of the consumer with the producer of the good.

Our schema views consumer satisfaction in social-psychological terms as a direct measure of utility. Satisfactions stem from two sources. First, satisfactions can be intrinsic to the act of consumption, i.e., people's utility is directly affected by using the characteristics of a good or interacting with service deliverers. Second, satisfactions might be extrinsic in character, i.e., they might stem from commodities jointly produced by consumer and producer activities. This distinction suggests that consumers should not be expected to be indifferent about how goods and services are provided and by whom. Additionally, it opens up the question of time lags associated with different types of satisfactions and situations in which intrinsically dissatisfying consumption activities might result in outcomes that are positively valued, e.g., going to a dentist.

Some Implications of the Model

Our model of the generation of welfare can help structure consideration of difficult questions that have long troubled policy makers and analysts. It can help in clarifying the confusion generally associated with the specification and valuation of the outputs of public programs, assist in the identification of the generally neglected issues of consumer technologies, and provide a framework to formulate thorny questions of accountability.

The problems of specification and valuation of output plague consideration of countless policy issues. While citizens and public officials tend to agree on abstract policy goals such as "good housing" and "quality education," they are referring often to quite different mixes of outputs. For some, quality education might mean a highly structured academic program, while for others it might mean a loosely structured program that emphasizes the inculcation of personal and social norms. The salient characteristics of a good home, for some, might be the physical characteristics of housing units, while for others, salient characteristics might be associated with the social status of the residents of an area. Such differences in perceptions and preferences are reflected in the great difficulties encountered by policy makers and analysts in attempting to define program and policy outputs.

Our model suggests that improvements can be

made by recognizing the consumer's role more explicitly. From this perspective, it would be useful for both policy makers and analysts to begin to structure questions pertaining to the different perceptions people have of schools, or homes, or health facilities, how they value the characteristics which they perceive in them, and how efficiently they can transform these characteristics into their own welfare.

Further pursuit of the same questions will assist in the identification of important issues pertaining to the technologies consumers employ in transforming the characteristics of production outputs into their own welfare. Constrained by the availability of resources, how do consumers vary in their ability to rent or purchase a home that satisfies their preferences or in their ability to select and participate in an educational program that would contribute to some desired level of learning? Such considerations are central to the current debate over the usefulness of income or direct service strategies in housing, health care, or educational policy. It might be fruitful to develop programs that directly enhance consumer technology. Because most programs have been production-side oriented, it remains an open question, for example, whether programs that attempt to improve housing construction technologies can lead to greater contributions to welfare than programs that attempt to improve the ability of citizens to assess, select, and finance a home.

Extending our model further, we have a means of asking new questions about accountability for outcomes--how much of which welfare outcomes can be attributed to the activities of producers and to the activities of consumers. Such issues are at the heart of the controversies over whether educational performance is primarily a function of the schools or the social backgrounds of students.[10] Similar considerations pertain to assessments of what kinds of crimes can and cannot be deterred by the police and what health problems are largely a function of behaviors of individuals and households. Our model not only suggests a way to structure questions such as these in terms of the joint effects of producer and consumer interactions, it also suggests consideration of a much finer grained set of variables than are generally examined in the analysis of these questions. Our current failure to sort out the issues of accountability hinders both the formulation of sensible program strategies and the conduct of policy-level evaluations.

III. INSTITUTIONAL ROLES IN THE GENERATION OF WELFARE

The next stage in our conceptual work was to integrate our economic model of the generation of welfare with a schema that identifies the important social, bureaucratic, and political roles that are involved in making choices affecting consumption and production processes. This allows us to identify in a systematic fashion the information requirements of different kinds of decision makers. It provides also a framework to formulate questions relating to performance and accountability from the perspectives of both production systems and various consumption units including individuals, households, and social groups.

This conceptual elaboration required synthesis of two important traditions of policy analysis--economic analysis that focuses on the problems of choice under the conditions of scarcity and the analysis of choice under conditions of uncertainty which is central to the study of organizations and political science. The theoretical problem was to develop a schema to describe how the structure of political and bureaucratic institutions shape the uncertainties associated with the production and consumption processes identified by our model of the generation of welfare.

Our approach to this problem rests upon a conception of a societal division of labor to cope with the uncertainty of making purposive choices. This division of labor can be described in terms of the patterns of authority and control formed by three broad classes of social institutions--the state, formal organizations, and the technostructure. The state is viewed as institutionalizing the right to cope with decisions affecting universalistic values (pertaining to the interests of all members of society). Included here are the legitimized political control centers of policy--executive offices, legislatures, and judicial bodies. Formal organizations institutionalize the right to cope with decisions affecting particularistic values. Included here are bureaucratic organizations such as industrial corporations, hospitals, trade unions, and government agencies. Finally, the technostructure institutionalizes the right to cope with those classes of decisions requiring the mastery of specialized knowledge, experience, or expertise. Included here are professional and guild-like associations.

These institutions provide the structural underpinnings for different kinds of decision-making arenas--the social setting of purposive choice. Formal organizations and the state shape hierarchies of decision-making arenas, with operational, managerial, and institutional arenas identified within formal organizations and an elaborate network of political arenas commanding the authority of the state. Operational arenas direct standardized and regularized organizational tasks. Managerial arenas control the interdependencies among these tasks and the relationships of an organization with its regular suppliers of inputs and recipients of output. Institutional arenas mediate between organization and its broader environment. Political arenas deal with decisions of a more generalized character, involving efforts to manage conflict among a range of particularistic interests and/or efforts to shape relationships between social inputs and social outcomes. These hierarchies of organizational and political arenas are crosscut by patterns of authority and control emanating from the technostructure. Actors in the technostructure control or influence decisions that draw upon specialized bodies of skills or knowledge. Our model can account for key elaborations of institutional structure including various patterns of bureaucratic form, alternative social bases of political support, and relationships between basic and applied science.

These institutionalized decision-making arenas can be characterized by the uncertainties they present to decision makers. These uncertainties have three major sources: (1) the internal structure of an arena, (2) their external environment, and (3) the level of culturally available technology. Further, we assume that it is functional (rational) for actors to draw upon information to reduce these uncertainties. Information consists of two elements--data items and inference structures. By "data items" we mean descriptors of events and activities. By "inference structure" we mean models of relationships between goals and means. These can range from formal causal models to procedures to achieve incremental conflict-settlement decisions.

It should be emphasized that this decision-hierarchy model identifies only those subclasses of indicators useful to decision makers in well-structured settings. This focus made our initial analytical tasks more manageable by excluding from direct consideration decision making by individuals, such as the consumption choices made by members of a family or investment decisions made by a self-employed entrepreneur. This restriction, however, may not be as limiting as it might appear. Decisions within institutionalized settings have large and increasingly significant impacts on many important aspects of human welfare. Additionally, specification of the characteristics of decision-making arenas in highly structured situations provides a framework to assess some of the processes of choice in informal settings, i.e., we can assume that a family must perform the same kinds of decision-making functions that are performed through the highly structured divisions of labor with a fully bureaucratized organization.

Some Implications of the Model

The application of this schema in determining the information requirements of different kinds of decision makers is a relatively straightforward exercise. By describing the structural underpinnings of various loci of authority and control within an institutional division of decision-making labor, we can isolate those sets of production or consumption activities for which different actors are responsible and the uncertainties associated with these responsibilities. This analysis provides criteria to identify both the data items required by different actors, and the kinds of inference structures that appropriately link these data items in a model of the relationships between goals and means. We have developed prototypical models of bureaucratic and political arrangements that can identify information requirements in general terms. More detailed identification of the information requirements of specific actors can be accomplished by an analysis of the particular sources of uncertainty that characterize a decision-making arena, i.e., the level of available technology, the internal structure of the arena and the characteristics of its external environment.

Implicit in such analysis is that information of a general character is of limited usefulness to any particular decision maker. Consequently, the problem of developing more useful social indicators rests not in the construction of some set of all-purpose measures of social conditions, but rather of identifying those sets of information that help to reduce the specific uncertainties associated with the performance of different sorts of social roles. The same analytic tools are applicable to address problems that have long troubled the developers of information systems for managers and policy makers, i.e., how to identify the demand for information in a systematic and structured fashion.

Beyond the identification of information requirements our models have another important class of applications in dealing with complex issues of performance measurement and the assessment of accountability. A complete treatment of performance issues requires an analysis of arrangements for consumption as well as analysis of the ways in which the pursuit of consumer values are affected by the structure and activities of a production system. This analysis contrasts sharply with conventional treatments of performance which tend to be bounded to the values and activities of producer units and respond to questions about how to achieve accountability within producing organizations. Our approach to performance assessment raises the broader question of how to hold institutions accountable for social outcomes in terms of the pursuit of various welfare values, i.e., in which ways do formal organizations or political units facilitate or hinder the pursuit of welfare by individuals, families, or communities. To distinguish these approaches, we refer to the former as institutional performance and the latter as social performance.

Analysis of social performance begins with an identification of the consumer-side analogs of the decision-making arenas of the production units. For example, the individualistic activities and particularistic values of a family unit or an individual might be the appropriate units to assess operational level performance while the collective activities and the more universalistic values of the local community might be the appropriate unit to assess the performance at the institutional level. This analysis requires not only an examination of consumer/producer interaction, but also interaction among the various levels of a hierarchical institution in examining social performance. At the political level, producer and consumer values can merge and assessments of political decisions must confront issues of social as well as institutional performance.

Determining accountability--the assignment of variability in levels of welfare to specific actors or units--requires analysis of the roles and interdependencies within a system of bureaucratic and political relationships as well as an analysis of the range and content of the transactions between production and consumption units. Such treatments of accountability bring together for simultaneous consideration analysis of policy making and of the implementation of policy. This capacity is particularly useful in a period when primary constraints on policy often appear to

involve questions of implementation rather than of political resistance. In all but the most simple system of relationships, analysis of this sort will require sequences in questioning and analysis in order to achieve a more satisfactory understanding of situations, rather than the application of a formalized model of causal relationships which is to yield, somehow, optimal solutions.

IV. THE GENERATION OF WELFARE IN A SPATIAL CONTEXT

The third element in our conceptual work was an effort to place the major considerations of our other models in a spatial context in order to provide a framework for addressing the complex interrelationships among large numbers of production units, consumption units and governments.[11] Problems of sorting out these interrelationships in large measure are the source of the extraordinary degree of confusion that tends to characterize both academic and public discussion of urban growth issues. These discussions tend to focus exclusively on either the incentives for movement behaviors or how government can be restructured in order to respond to these behaviors. Our model addresses the problems and policies of urban growth in an analytic context allowing simultaneous treatment of the patterns of governmental organization and incentive systems that shape the structure of urban areas.

In the development of this model, we drew upon the growing literature on economic "clubs."[12] This literature examines the incentives for group formation for the purposes of production and consumption. Martin McGuire has shown that the incentives for the formation of groups (which are called "clubs") are essentially the same for the purposes of both production and consumption and in the private and public sectors. These incentives involve increasing benefits and reducing costs as well as a taste for association. These factors help identify key considerations which determine the size and scope of public and private production and consumption clubs. In addition to the fairly straightforward consumption and production clubs identified in this literature, we have chosen to treat political units as "clubs of clubs." Clubs of clubs pursue values that are universalistic in character, i.e., values that reflect the aggregation of individual interest or the interests of some community.

Drawing upon all our conceptual work, the model focuses on needed definitions of pertinent indicators of the interrelationships among the activities of producer groups, consumer groups, the state, and the characteristics of places. It should be noted at this point that we do not treat places in such conventional terms as a geographic area bounded by jurisdictional lines. Rather we treat places in terms of the potential values they present to various collectivities, with jurisdictional boundaries being viewed as one of many factors that affect these potential values.

In developing the model, we first explored the interrelationships between producer and consumer groups and their experiential environments. Here the characteristics of places were viewed solely in terms of the collective expression of particularistic interests or adaptations to the exercise of these interests. Next, the model was elaborated by showing how the authoritative expression of universalistic values by the state further shapes the characteristics of places and influences the decisions of both producer and consumer groups, focusing on purposive choices which are made by individuals and groups. These groups are more or less formally organized in an attempt to permit choices which improve the situation of the group and group members. Individuals and groups interact both within and across organizations and political arenas. The relationships among the various levels within a given producer or consumer organization, and between such organizations and political arenas, are neither status nor "equilibrium-seeking." This is also true of the relationships between producer and consumer groups.

Each group operates in an "experiential environment" which is more or less insulated from, expandable into, or permeable by the effects of actions of other groups. For example, entry into or exit from groups varies in its ease. Marketing of products can occur over a much more flexible geographic area than a single governmental jurisdiction. A particular tax affects some groups more than others. In considerable part, such dynamic interactions among individuals and groups give rise to boundary problems--including those of governmental jurisdictions and functions--which are at the heart of urban growth issues.

In this context, clubs of clubs attempt to deal with the consequences for universalistic values brought about by the mobility behavior of clubs. We refer to these efforts as urban growth policies. Clubs of clubs can attempt to channel spatial movements by altering the value of places for individuals and clubs. Such activities can be assessed in terms of the relationship between clubs and the potential values of places. They can develop, also, structural responses to changing characteristics of places by creating new jurisdictions, altering the boundaries of existing jurisdictions, or changing the flows of authority or resources through networks of intergovernmental relationships. These structural adaptations to growth processes not only alter the value of places for the pursuit of the universalistic values of clubs of clubs, but also for the particularistic interests of production and consumption clubs. Such adaptations can, in turn, initiate chains of second- and third-order spatial movements and alterations in the characteristics of places that might nullify the initial objectives of a particular adaptation.

Implicit in this model is that consequences of slack and forces leading to disequilibrium should be taken seriously and that major alterations in either the incentives for movement behavior or in the structure of government be assessed in a broad analytic context. For example, an effort to provide a more equal distribution of fiscal resources among the various jurisdictions of a metropolitan area by creating one large jurisdiction having a common tax base may have subsequent impacts on intergovernmental fiscal flows, plant location

decisions, and household mobility that could nullify the original policy objective. Therefore, the mobility of individuals and groups in metropolitan settings necessitates a public urban growth policy which is viewed as an ongoing adaptive process requiring both structural (boundary and functional) changes in patterns of governmental organizations and specific efforts to channel the spatial movements of individuals and groups.

V. CONCLUSION

If we could claim at the conclusion of this paper that any of the policy issues confronting the nation could be solved once and for all by the application of these or any other set of models, we would appear to be much more in the mainstream of policy analysis as it has been practiced. We, of course, can make no such claim. Nor are we really convinced that anyone should imagine that such an outcome is possible. One of the key constraints which seems to have affected our ability to come to grips with the complexities of such issues as urban growth policy, institutional responsiveness, or accountability for social outcomes, is an initial presumption that there is no clear policy unless a set of agreed upon final outcomes is established. We have argued throughout this paper that the complexity of interrelationships which must be understood, the legitimate differences in perspectives and values of consumers, producers, and decision makers in different arenas, as well as the slack and disequilibrium which characterize most real-world systems make such an expectation for policy unrealistic.

Policy setting relates not only to outcomes; it also relates to the creation of processes in which issues can be raised and relationships developed. Policy analysis must reflect the complexities of needed interrelationships if it is to be useful. It will not do to blame the world for failing to perform according to a tidy analytical perception. At the same time, it will not do to argue that there are no systematic forces at work in determining variations in factors which influence the generation of welfare. We are left with the balancing act mentioned at the beginning of this paper--between the highly structured and formalized models of specific academic disciplines and rich descriptions of events or situations that provide no basis for the systematic examination of issues. Our hope is for the continuing development of coherent conceptual structures which assist in isolating key issues and relationships to facilitate (incremental) improvements in our ability to enhance welfare.

REFERENCES

1. Some economists are attempting to rectify this problem. Illustrative of such efforts is Buchanan and Robert D. Tollison, eds., Theory of Public Choice: Political Applications of Economics (Ann Arbor: University of Michigan Press, 1972).

2. In this regard we agree with the general thrust of Vincent Ostrom's argument that important bodies of political and administrative theory provide little capacity to formulate questions pertaining to the interactions between public institutions and the citizens served by these institutions. See his arguments in The Intellectual Crisis in American Public Administration (University, Alabama: The University of Alabama Press, 1974).

3. These efforts are reported in Harvey A. Garn, Michael J. Flax, Michael Springer, and Jeremy B. Taylor, Models for Indicator Development: Tools for Applied Social Research (Washington, D.C.: The Urban Institute, forthcoming) and Harvey A. Garn and Michael Springer, "Formulating Urban Growth Policies: Dynamic Interactions Among People, Places, and Clubs," Urban Institute Working Paper 1206-16, October 1973 (to be published in a special issue of Publius, 1974).

4. Our approach to these issues was instructed by Michel Crozier's analysis of bureaucracy as an institution characterized by dysfunctional behaviors, and Albert O. Hirschman's discussions of the endemic slack and inherent inefficiencies of firms, government agencies, and political units. See Crozier, The Bureaucratic Phenomena (Chicago: The University of Chicago Press, 1967) and Hirschman, Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States (Cambridge: Harvard University Press, 1970).

5. Our analysis of these processes draws heavily upon James D. Thompson, Organizations in Action: Social Science Base of Administrative Theory (New York: McGraw-Hill, 1967).

6. William Alonso has commented:

> "Economics has concentrated on the process of production and virtually ignored those of consumption. It has treated the act of consumption as magic: final goods and services disappear as they arrive to the consumer, without even a wave of the cape. To be sure, certain areas of spatial economics deal with the consumer, most notably rent and central place theories, some studies in transportation, and certain recent developments in welfare economics which take into account travel or queing time. But even here the consumer is treated in a most abstract fashion, disembodied into a demand curve or a utility

function. Yet the consumption activity is the principal concern of the most widespread of economic units, the household. It is an activity that itself consumes resources, and it is internally structured in terms of a technology and the availability and relative costs of factors." in "The Economics of Consumption, Daily Life, and Urban Form," Department of City and Regional Planning, University of California, Berkeley, December 1970, Working Paper No. 139, p. 1.

7. We have combined two innovative approaches to the analysis of consumption, the work of Gary Becker on the household as a production unit and Kelvin Lancaster's recent contributions to the theory of consumption. See Becker, "A Theory of the Allocation of Time," Economic Journal, Vol. 75 (September 1965) and Lancaster, Consumer Demand: A New Approach (New York: Columbia University Press, 1971).

8. This work is reported in Models for Indicator Development, op. cit.

9. Although it is true, of course, that many services are exchanged on the market, what one usually buys is access to a service delivery process rather than an identifiable output.

10. Aspects of this controversy are illustrated by the debates surrounding the publication of the Coleman Report on the determinants of educational performance. See James S. Coleman, et al., Equality of Educational Opportunity, Office of Education, U.S. Department of Health, Education, and Welfare (Washington, D.C.: U.S. Government Printing Office, 1966), and Eric A. Hanushek and John F. Kain, "On the Value of Equality of Educational Opportunity as a Guide to Public Policy," Harvard University, Program on Regional and Urban Economics, No. 36, February 1969.

11. An initial formulation of this model is presented in "Formulating Urban Growth Policies," op. cit.

12. Our work was aided particularly by Martin C. McGuire, "Private Good Clubs and Public Good Clubs: Economic Models of Group Formation," Swedish Journal of Economics, Vol. 74, 1972, pp. 84-99. Other important contributions to the "club" literature include Mancur Olson, Jr., The Logic of Collective Action (New York: Schocken Books, 1969); Charles Tiebout, "A Pure Theory of Local Expenditures," Journal of Political Economy, 1956; and James Buchanan, "An Economic Theory of Clubs," Economica, 1965.