LOCAL SOCIETAL INDICATORS: A PROGRESS REPORT

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In the last several years a growing body of literature usually referred to as social indicators has appeared on the academic scene. On occasion it carries alternative labels, such as social accounts, social reports, or monitoring social change.[1] This literature focuses on the measurement and quantification of societal issues in an effort to utilize social science knowledge for public policy purposes. Those who have written about indicators explicitly are few in number, primarily representing the fields of political science, public administration, and sociology. Thus, the literature tends to emphasize a few major themes, almost all directed at a macro scale of analysis, covering the entire nation.

More recently there has emerged a growing interest in urban indicators, which entails the application of social indicator approaches to urban areas and metropolitan regions. This development is taking place before many of the issues associated with social indicator approaches have been resolved. The field is still young, the number of seminal ideas contained in the literature is small, and the number of suggestive uses of indicators is increasing rapidly. These recent developments are intimately related to what we consider urban problems requiring 'solutions,' but even the list of problems is changing rapidly.

Only a few years ago what were considered urban problems focused upon issues related to growth and development. Approximately fifteen years of experience has resulted in the development and testing of reasonably sophisticated models dealing with urban structure, form and growth.[2] Presently we consider issues relating to lawful behavior, political efficacy, environmental quality, segregation, health, ethnicity, education, employment-unemployment, housing, transportation, aspirations, expectations, perceptions, values, objectives and goals, as all constituting urban problems. Of course, there is nothing inherently urban about this list. These issues relate to ethical questions about the structure of society and the distribution of societal benefits and costs. Insofar as we have become an urbanized nation and insofar as certain groups in society are heavily urbanized, many of these ethical issues have taken on the character of urban problems. The issues are real, the need for 'solutions' is evident, and the application of urban indicators for policy purposes is being explored.

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INDICATOR PERSPECTIVES

The literature on indicators is so recent that there is little consensus at present about what indicators are, what they should be, and how they are to be utilized. Some of the topics appearing in the literature which have provoked disagreements, include:[3] the necessity for and utility of indicators of direct normative interest, the utility of indicators for the setting of goals and priorities, the utility of indicators for the evaluation of social programs,[4] and indicators contained within a system of social accounts.

Underlying the dialogue concerning the usefulness of indicators are two groups of persons: (1) those who are extremely optimistic about their immediate utility for a wide class of societal issues, both in the public and private sectors, and (2) those who are cautiously optimistic about their eventual use for societal issues, subsequent to an intensive period of fundamental social science research. The first group is composed of public officials as well as academics who are closely related to the political system; the second group is primarily composed of academics who are interested in understanding the structure and functioning of social systems, but are not intimately related to the political system in a professional sense. This categorization reflects an expected distinction between social science activists and research oriented scholars. The distinctions between these two groups is also reflected in their research strategies and writings. By and large, the first group concentrates upon macro social indicators, for the entire nation, and some very general concepts about their utility. On the other hand, the second group tends to be more empirically oriented in terms of operationalizing indicators and, therefore, micro indicator research is more common within this set.

There are at least several major themes which permeate indicators literature in terms of their usefulness.[5] They include: (1) improved descriptive reporting on the state of society, (2) the analysis of social trends and social change, (3) assessing the performance of society, (4) anticipating alternative social futures, and (5) social knowledge for societal control. Obviously, these five themes have significant interdependencies. Unless we have good descriptive reporting for the data base

it becomes extremely difficult to analyze trends and social change, performance assessments yield questionable validity, it becomes almost impossible to anticipate societal futures, and the ability to exercise some measure of control over social processes becomes hopeless since there is little understanding of where to intervene in the system.

Although we have not been terribly effective in the utilization of available information for social policy purposes, there is a need for better descriptive reporting on the state of society. Unless the descriptive data base is comprehensive, valid, meaningful, and forthcoming on a regular basis, it becomes difficult to proceed further. Perhaps the most serious problem facing indicator research and utilization, however, centers upon conceptual requirements -- what should be measured and why.

The use of indicators for the analysis of social trends and social change was originally politically motivated; more recently it has become research oriented. In its scientific orientation it represents a basic intellectual concern for understanding how social systems operate and developing and testing hypotheses about the determinants of social change. In the long run, this activity will hopefully yield some knowledge about social systems behavior, the determinants of social change, and the design of appropriate policy for social problems. In the short run it probably has little applied utility.

It has been suggested by some writers that indicators in a social accounting framework can be utilized to assess the performance of society. However, in order to use indicators for normative assessment purposes it is necessary to have the specification of goals against which actual performance can be compared as well as the specification of desirable and undesirable system states. Writers expressing this point of view usually avoid suggesting how normative criteria are to be developed, by whom, and for whom. Given the diversity of the ever changing goals in our society, it is not at all clear that meaningful normative criteria can be developed for complex social systems or that their value will hold for more than very brief periods.

Anticipation of alternative social futures has been suggested as the logical outcome of a process based upon a broad array of indicators. Clearly, forecasting alternative futures for differing sets of policies is directly linked with detailed and accurate understanding of existing system states and their determinants. Otherwise, futurism becomes an activity for self-appointed sages with unique powers. Thus, for futurism to be successful it is necessary for the analysis of social trends and social change to become better developed and more comprehensive in scope.

The use of social knowledge for societal control is an expression of managerial thinking. This view suggests that we can develop assessments of the social order, predict futures, and place social processes in a control theory setting. Though it may be possible to control some major activities of business firms (large or small) and even governmental agencies, it is far less likely that we are or soon will be able to control complex social systems. This entire concept is completely elitist in attitude, and frightening. Who will do the controlling, for what ends, using what means, and who are to be controlled and why are issues usually avoided. The answers to these problems are assumed to be self-evident truths representing an undefined, but broad based popular consensus.

APPLICATIONS

Some of the themes regarding the use of indicators, previously mentioned, may appear to be brilliant conceptions or ludicrous suggestions. It is much too premature for us to settle on one or two approaches while discarding others. Their validity and feasibility are yet to be determined. An intensive period of empirical testing is required for all the approaches suggested in the literature as well as new ones that may be forthcoming. Even those approaches which have received the most favorable comment for their conceptual formulations have yet to be verified.

In order to justifiably realize the promise of indicators, not only is it necessary to suggest apparently brilliant conceptual models but it is also necessary to empirically verify them. Without an active process of empirical testing for model specification, validity and reliability, most of our conceptual models will continue to lie on the shelf for conversation and intellectual purposes alone. Clearly, the search for knowledge can be initiated either deductively or inductively. At some point in the process, however, it is necessary both to empirically verify deductive propositions and theorize about empirical findings.

One of the major difficulties associated with the types of indicator approaches suggested in the literature is their concentration upon highly aggregative forms of analysis spanning the nation. Such an emphasis, which has some theoretical appeal for certain classes of problems, has relatively little utility for application in any specific geographical area. Information designed to represent national trends usually is not constructed by aggregating local or small area totals. Thus, the intra-urban and inter-urban diversity present in our cities and urban regions is completely masked by the national totals and it is impossible to disaggregate back to the local scene. However,

the formulation of effective public urban policy at both national and local levels is largely dependent upon understanding the nature of these diversities.

Since we have become a nation of urban regions and since this process probably will continue in an accelerating fashion, it is likely that large payoffs can be derived from the development of urban indicators, both theoretically and empirically. At this level of specificity indicators begin to reflect the issues confronting the real world, where their ultimate utility holds much promise. Every one of the indicator approaches mentioned earlier has an urban analogue. Thus, it is possible for analytical purposes to define a national system of urban regions in terms of their inter-connectedness; a set of urban regions in terms of their individual similarities and differences; and small areas within a particular city region. This shift in emphasis represents a movement from vague abstractions to reality-oriented concepts of planning and design.[6]

A DEVELOPING PROGRAM

Over the past two years the Center for Urban Studies (CUS) at Wayne State University has been attempting to develop a wide-ranging program of research, education and service relative to societal indicators. The program includes work in both social and economic indicators. Simultaneously, there has been a shift in emphasis away from macro societal indicators representing national conditions to local societal indicators, focusing upon neighborhoods, communities, and the metropolitan region. The activities and interest pursued vary from theoretical frameworks and concept formation to empirically based testing of hypotheses and concepts. Thus, we have become more problem oriented in our search for understanding social systems behavior and the role of indicators rather than developing holistic designs for a general system to ascertain metropolitan well-being. It is our hope, however, that this problem oriented focus, over time, will result in a collection of research and understanding that may be the basis for a more general system of local societal indicators.[7]

The development of this indicators program at CUS began with the work of Gross and Springer (1969, 1970). In their writings they are essentially concerned with macro societal indicators useful for national policy planning. The conceptual utility of indicators which they advocate for planning and policy analysis is intellectually appealing; however, the argument is dependent upon the existence and specification of a general theory of social system behavior. To my knowledge no such system is sufficiently well developed yet to permit the implementation of their ideas.

More recently Porter (1970) has developed a model of resource mobilization, in which he analyzes the development of federal aid programs and the resource flows to their intended beneficiaries. He has been able to isolate three different patterns of resource flows: (1) symbolic allocation, (2) catalytic allocation, and (3) perfect allocation. The first pattern occurs when funds released by an earmarked grant are used for purposes other than those stipulated by the donor. The second case, catalytic allocation, occurs when a grant serves to attract additional funds into the aided program. Perfect allocation occurs when the full amount of aid (no more or no less) is added to the "normal growth" of a given program. Porter's model was developed through an analysis of federal aid to education. While the model framework has a macro-orientation, the concepts and criteria for identification and measurement of indicators of resource mobilization and resource flows are quite applicable to the local level.

The second area in which progress has been achieved is in Mattila's (1970) work on metropolitan income estimation. Income estimates are the starting points for any serious analysis of inequality, poverty, wealth, and social stratification. Personal income estimates by metropolitan area do exist, and they represent an internally consistent set of accounts. They have been heavily used as an all purpose measure of wealth. On the other hand, if one were concerned about the structure of the metropolitan economy and policies for industrial concentration, diversification, and development and employment, personal income estimates have numerous defects since they cannot be disaggregated by sector. They represent income received, irrespective of sector of origin and irrespective of whether locally, nationally, or internationally produced. For structural analysis what is required is metropolitan income produced by sector of origin. For this purpose Mattila has developed a recursive model with ten structural equations of the metropolitan Detroit economy with which he is able to estimate income produced by each of twenty-one non-agricultural sectors for the 1956-1968 period.

Were models of the Mattila type available for a number of metropolitan areas, it would be far easier to evaluate the impacts of federal and state policies upon metropolitan areas than is presently the case. In Detroit it is readily seen that there has been a major structural shift in employment during the 50's and 60's out of motor vehicles, even though income produced by the motor vehicle sector has continued to increase. For an industry that is markedly becoming more capital intensive, with an absolute decrease in employment, there are serious implications for the employment structure of the Detroit area. Other manufacturing sectors have maintained a rather

even balance between employment and income shares for the region. Although the Detroit economy continues to be heavily dominated by the automobile industry and its suppliers, and is thus cyclically unstable, there is some evidence that the economic base of the region is becoming more diversified.

One of our areas of interest involves information systems for urban and regional planning and policy analysis. In the past few years there has developed a growing collection of literature dealing with urban information systems, and this growing interest has been supported by federal programs. Unfortunately, one of the most fundamental sources of confusion regarding automated information systems centers upon the distinction between the management of information and management by information. In the former case, the objective is to obtain utility from the on-going processes of acquiring, storing and distributing information within or between organizations. The use of information in this fashion is an attempt to rationalize existing archaic and inefficient information channels. There are significant opportunities for achieving these objectives through automation, especially where information usage follows pre-programmed patterns. Management by information involves the utilization of information systems to help decision-makers make decisions or help managers manage.

Although there are scores of publications which suggest urban information system designs, under careful examination most of these system designs are patently absurd. Not because the hardware and software packages will not process data in the manner advertised, but rather because there has been little attention given to what data should be processed and why. This state of affairs exists because information systems in the public sector have been treated as technical computer problems, without the realization that public decision-making takes place in an environment of contesting claims. At the present time, those interested in information systems represent a separate grouping from those concerned with the utility of indicators for public policy purposes. It has been suggested by Perle (1970b) that a merging of interests between these groups is likely to develop, so that descriptive measures of social conditions affecting individuals and families will be merged with more conventional measures of physically observable phenomena. Then, perhaps, urban planning and policy analysis will be better able to cope with the social issues of the urban environment rather than their physical manifestations.

In a related project, we were asked to review the status of societal information for the state of Michigan and the utility of indicators for state-wide planning (Perle et al., 1970). In that report we reviewed the present status of quality of life reporting at the state level and dealt with issues involving the organization of societal information. In addition, for several classes of indicators we reviewed the existing data sources, indicated inadequacies in existing measures, and suggested alternative measures for a number of areas. This review and analysis covered the following types of indicators: demographic, health, economic, lawful behavior, education, and environmental. The study terminated with a set of recommendations to the state for the initiation of a regular system of social reporting, to be initiated immediately with the results forthcoming in 1972 and covering the areas of lawful behavior, environmental quality, health, and education. Throughout the report, special attention was given to urban oriented issues.

More local in nature have been a number of efforts dealing with a variety of subjects, including: citizen calls for help to police departments (Bercal, 1969), consensus and disparity in the public's perceptions of educational goals (Nowikowski, 1970), and employment as a determinant of Detroit's future (Warner, 1971). The paper by Bercal argues that metropolitan police departments should be viewed as service agencies which are involved in dispensing a wide variety of services, both to the individual and society. This thesis is presented in opposition to the traditional view that police departments should be studied as quasi-military organizations which "enforce the law."

After analyzing citizen calls for help in Detroit, New York and St. Louis, Bercal concludes that police departments dispense a wide array of personal and societal services that have little, if anything, to do with law enforcement. In Detroit in 1968 only 38.7% of dispatches of police patrols had to do with crime, prowlers, alarms, and recovery of property; 34.8% of the patrol dispatches dealt with public disorder, like family trouble, missing persons, neighbor trouble, or rubbish complaints; 12% dealt with crimes of negligence (accidents - vehicles); 10% with health service (sick person, animal bites, etc.) and 4.5% with matters of safety (directing of traffic, hazards, etc.). Bercal suggests, therefore, that by viewing metropolitan police departments as service agencies, the needs of the community as well as the services offered will be identified. In so doing the "real" nature of these needs may be determined and the limitations of effective police service in "satisfying" these needs recognized. As a result it is hoped that such an analysis will lead to a more rational restructuring of the responsibilities of metropolitan police departments within the communities they serve and that it will lead to innovative solutions to what are now defined as "police problems."

One of our experimental projects aimed to discover whether different socio-economic groups in the urban environment have similar or different perceptions concerning the goals of public education. Nowikowski describes a two-stage research design, where open-ended discussion groups (5-8 persons) were used to elicit their expectations which subsequently were to be used for the construction of a large sample questionnaire. The first stage included groups of parents of students, teachers, and high school students drawn from three differing socio-economic environments. Thus, nine groups were interviewed. The findings of stage one were somewhat interesting for the education we received, but they did not indicate as wide a spread of views as we had anticipated; however, the resource commitments necessary to conduct the second stage were not available. Therefore, the project has been terminated. Another experimental endeavor, reported by Warner (1971) involves the use of several existing employment forecasts of the Detroit region as the basis for tracing through a variety of economic impacts, including the occupational structure of the population, the propensity to attract in-migrants, and residential locations for differing income groups.

One study attempted to utilize traditional socio-economic variables to explain some attitudes and patterns of behavior of the residents within the Model Neighborhood Area (MNA) of Detroit. The data source was a 1968 survey of the MNA, conducted on behalf of the City of Detroit. Maimon (1970a) provides some evidence that the common use of income, education, race and sex as explanatory variables may not be of great assistance in the Detroit inner city. Moreover, preliminary analysis of satisfactions and dissatisfactions among inner city residents regarding their physical and social environments in terms of some personality traits (internal versus external control) yielded similar results. It appears that a very heterogeneous area of Detroit, in terms of income, education, race, and sex, has been found to display a high level of homogeneity in so far as some attitudes and some modes of behavior are concerned. Maimon suggests that there is a certain phenomenon associated with inner city life in Detroit which tends to elicit this similarity and homogeneity, and this phenomenon appears to offset some of the usual social differences. These preliminary findings require further analysis since they cast some doubt upon "conventional wisdom."

Recently increasing attention has been given to the problems of undesirable, unintended, and unanticipated secondary consequences of various kinds of activities. The damage caused to the natural environment by our present modes of living and the social and political implications of the war in Southeast Asia are, perhaps, the most dramatic examples of the day. Our present ability to understand, anticipate, and control some of these consequences is quite limited, yet their relative importance in our lives is increasing so rapidly that they soon may become of primary importance. Among social scientists, economists traditionally have paid the most systematic attention to these problems, utilizing the concepts of social costs and benefits and externalities. The insistence of economists to quantify consequences in monetary terms and the desire of the proponents of "social indicators" to detach themselves from economic constraints have brought increasing attention to the questions.

It appears that a more general framework of analysis is required to deal with secondary consequences, one which can encompass the considerations of both economics and the other social sciences. Maimon (1970b) has been attempting to develop such a framework and it is hoped that some empirical testing will be forthcoming soon. The major components of this analytical framework include the distinction between primary and secondary consequences, the cutoff point in a time horizon, decision makers and strategies of decision, identification of the affected population, trade-offs between performance characteristics and future capability, and reviews of some techniques for measurement and anticipation.

Located as we are in Detroit it is possible to implement some of our ideas about indicators. In this regard we perform a service function by lending our abilities to local agencies. We have given advice to one local agency for the evaluation of a job training program for teenagers in the inner city; one member of our staff is presently engaged in setting up an information system for a comprehensive medical care program and clinic for inner city residents; and we have been assisting in the creation of a social planning unit in the city of Detroit in addition to assisting in the design of an evaluation strategy for the Model Neighborhood Agency (Musial, 1969).

A number of the substantive areas in which we have already made some explorations will be pursued, such as the development of societal indicators for urban information systems, understanding the behavior and attitudes of differing socio-economic groups, and developing a framework for the analysis of secondary consequences. In addition, several other areas are being developed, including the analysis of mass behavior leading to varieties of urban violence and the analysis of alternative urban transportation systems and their locational and societal impacts.

NOTES

[1] A good selective bibliography of the indicators literature through the fall of 1969 is contained in Agocs (1970a). Since the preparation of that bibliography other materials on indicators have appeared, including: Ferriss (1969a, 1969b), Duncan (1969), Cooper (1970), and Henriot (1970).

[2] Good reviews of urban development models are contained in Irwin (1965) and Hemmens (1968).

[3] These issues are critically reviewed by Sheldon and Freeman (1970). Another critical review of the indicators literature, from a very different point of view, can be found in Hoos (1970).

[4] An excellent presentation dealing with requirements for effective evaluation has appeared in Campbell (1969).

[5] This section has benefited by the comments of Springer (1970).

[6] This perspective is forcefully presented by Gross (1969a). In addition, it is exemplified by the appearance of a journal volume dealing with urban indicators (Perle, 1970a).

[7] From Sept. 1969 through July 1971, this program has been supported by an unrestricted grant from the Bank of the Commonwealth (Detroit). That support is gratefully acknowledged.

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