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On Planning and its uses in Government

FRED ROSENBERG
Chief Economist

November 1971

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Honorable County Executives
Nassau County Board of Supervisors and
Suffolk County Legislature
Mineola and Riverhead, New York

Gentlemen:

We are pleased to submit another report in our Comprehensive Plan series. This is the first of a two-part report concerned with the application of planning, programming and budgeting systems to county government operations.

We trust you will find it useful and interesting.

Very truly yours,

Leonard W. Hall
Chairman

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FOREWORD

The development of a comprehensive regional plan is a recursive process that takes place along several tracks — serially and parallel — reflecting the multi-disciplinary and inter-disciplinary nature necessary for the planning of community growth.

In simplified terms, the flow pattern in the development of a plan is as follows:

1. Goals and objectives are determined at the onset in order to clarify the purpose of the plan, and to serve as a guide to relevant, consistent and requisite work on the part of the planning team.

2. During the initial phases of work, inventories, trend analyses, and projections thereof, are made. These studies identify the community's resources, needs, constraints and options.

3. The next stage involves the formulation of alternative courses — both graphic and written — and the consequences of each, that may provide solutions to the various facets or sub-elements of community structure and growth. Each alternative is tested as to its adherence to the formulated goals and its general efficiency in human, governmental and fiscal terms.

4. The next phase, or synthesis stage, involves the selection of those facet elements that come closest to achieving a maximization of the overall goals and melding them together to produce a harmonious and workable comprehensive package. It is at this phase that the parallel tracks must merge.

5. The last step in the formal plan development process is in part a translation stage in which the plan elements are redefined in action terms.

The full test of a successful plan is measured by the degree of its implementation. From the community's point of view this means a continuation of the public involvement and community information that should have been part and parcel of the planning process from the onset. From the governmental side, the implementation takes form in several ways. Capital programs and capital budgets are one device for carrying out those elements of the plan that may be accomplished through direct public expenditures. Other aspects may be implemented by the enactment or administration of subdivision and zoning legislation. Other portions may be carried out in conjunction with the private sector in setting the climate for cooperative action between entrepreneurs and government, e.g., planned-unit-developments, innovative housing programs, and other related private capital investments.

There is an additional consideration, especially peculiar to governmental operations, and that is the assurance that programs and the expenditures thereof will be carried out with maximum efficiency to ensure program delivery and reasonable and proper allocation of monetary resources. It is this last concern that is the essence of this paper — the first of a two-part series that deals specifically with the questions of implementation from a fiscal and budgetary position.

During the preparation of the Nassau-Suffolk Regional Comprehensive Plan, in-depth fiscal analyses and projections were made of governmental operations for all jurisdictional levels of governments within the region. One result of these studies was the recommendation of a sales

tax at the county level to forestall the adverse impacts of increasing property taxes. The Board also funded a special study undertaken in Nassau County by the budget staff in the County Executive office for an "MIS" program. This management information system is a tool to enable the budget office to measure the unit costs of each governmental program. We have similarly undertaken a separate study for Suffolk County entitled "A Service Budget Approach", which primarily is the application of a planning, programming, budgeting system (PPBS), to all county departmental operations.

In this paper Mr. Rosenberg sets the theoretical framework essential for an understanding of the planning process as developed by the Board, including the relationships of planning, programming and budgeting.

L. E. K.

November 16, 1971

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I. INTRODUCTION

In the vernacular this study might be called a job definition for planning. Such a definition would describe what has to be done within the job, the operations needed to get it done, and its relation to several other jobs being done simultaneously or sequentially to get a final product out. Such a description would have to identify opportunities and necessities for cooperation with others and possible areas of conflicts. It would also consider means for improving the product and for avoiding conflict, through better job specification and organization of function.

This paper attempts to do these things for government planning. However, in planning for government programs involved with so tremendous a range of society's activities and behavior, it is easy to go astray about the nature and responsibilities of the job and to become confused about what must be done and the basic methodologies and technologies involved. This, in fact, is too often the situation in planning today. Thus, more than simple job description is involved: increased understanding of responsibilities and relations is a prerequisite to describing the job adequately.

Understanding is especially needed in these areas:

—Identification of the basic perspectives and information needed in six approaches to management of government operations: budgeting; program management; distributive planning; functional planning; comprehensive planning; scientific.

—Establishment of the grounds for relation, cooperation and conflict among these six approaches, through analysis of their requirements and discussion of how they function.

—Analysis of the operational relations between program management and distributive planning on one hand, and the relations of distributive to functional and comprehensive planning on the other. Problems of resource allocation and related functions have been a persistent source of confusion and conflict.

—Operational separation of functional and comprehensive planning. The confusions about these two have prevented a clear focus on what jobs are to be done and what results are to be achieved.

—Definition of techniques and methods of functional planning.

—Definition of techniques and methods of comprehensive planning.

—Determination of the legitimate roles for social and psychological sciences in planning. Confusions here have severely strained personnel who enter planning from these fields, and led to misuse of scarce talent resources.

—Policy for advancing comprehensive planning as a field of inquiry and achievement.

—Determination of the relation of scientific endeavor to planning.

—Using these determinations to formulate new policies for training and using government management personnel.

—Identification of problems of political relationship and possible planning responses.

—Placing this substantive approach to job definition for planning in the context of past theories on the organization and nature of the planning function.

The six management approaches are presented first. The three non-planning approaches are selected because they interact most strongly and intimately with planning, or have the most impact upon its future. The scientific approach is discussed last because the demonstration of its need depends upon understanding the tasks of functional and comprehensive planning.

Then suggestions are presented for reorienting management training and organization, and for dealing with problems of political relationship. The following section relates the planning ideas in this paper to past work on the organization and nature of planning.

The concluding part of this paper deals with the implications of this discussion of government and planning for the development and use of social indicators. As well as showing how the planning

ideas herein contained have a conceptual technological impact on the ways in which practicing professionals can develop indicators, some limitations of perspective in bureaucratic and academic social science approaches also will be presented.

While this paper emphasizes planning and its problems, it also views planning in the perspective of its relations to other activities of government management and shows how a more rounded view of planning technology influences perceptions of social science adequacy. Thus besides providing foci for the work of planners, it should be useful to budgeters, public administrators, program managers and scientists, and may provide all of these with some added insights on the adequacies of social science offerings.

II. THE BUDGETING APPROACH

Budget units are the most influential agencies at all levels of government. Within the limits set by legislation, they control the flow and direction of expenditure and program in accordance with executive will. Typically, budget evaluations of agencies and their programs center around four questions:

—How do programs and their requirements relate to the overall flow of funds for all activities of government?

—How do programs and their requirements relate to the specific funds for departmental and program operation?

—How efficient is program operation?

—What cost-benefit relations arise from program operation?

The first question requires overall information on government receipts and expenditures and on the amounts of funds committed through legal or priority decisions. These data set parameters within which the financing and expenditures of each program must be weighed. Normally this overview is the responsibility of the chief officers in a budget agency, and this information provides one foundation for policy-making by elected executives. A budget overview often is compared with ones provided by chief planning officers, and, in a general or more segmental manner, by high political officials. Overview information and perspective is rarely available below these levels until a budget has been presented.

The second question requires information on the relation of specific departmental and program operations to the flow of funds. Commitments for staffing, client payments, capital construction, administrative services, equipment, etc., must be related to money available for the budget period. The intent—prudent control over the rate of expenditure—has little to do with policy; here the budget officer shares interests and data with departmental program management personnel. The budget personnel who handle these responsibilities usually have less authority and a lower hierarchic level than those responsible for the policy area above.

The third question, on efficiency, requires information that relates components of operational input to output. These components can be quite detailed (e.g., comparing laundry costs at various institutions) or more general (e.g., comparative costs of pupil education or rehabilitation services). The comparison may be among similar operations within a state or other area, or between proposed and preceding product and cost levels. Here the budget officer resembles a policeman who sees that the bounds of propriety are not exceeded. The choice of materials for efficiency review depends upon past practices in requiring and organizing data on program operations. These may vary widely among programs and jurisdictions, and the budget officer's sensitivity and alertness can determine the extent and quality of efficiency reviews. The budget officer at this level has interests in common with departmental and program management personnel.

The fourth question deals with the relations of benefits to expenditure, as measurements are possible and available. This pragmatic interest follows two lines: "What are we getting for our money?" and "Is it costing us too much?" It is in this context that the budget officer shares interests most closely with the program manager and the functional planner.

III. PROGRAM MANAGEMENT

Program management is a completely different world. Program managers — agency heads, with

their top personnel, are directly responsible for doing something with people or materials outside government. They must deliver a daily product or service, in contrast to those others who control and overview expenditures, plan or measure, review and evaluate programs. These differences show in their view of time: a program manager works in the here and now, for today and tomorrow. The time perspective for budgeteers is governed by the budget cycle and annual program review. For planners and scientists, longer and varying periods, often are operative. With his time framework, a program manager concentrates on pragmatic questions of procedure and resource disposition. He has a down-to-earth attitude and decision-making process, based on a mix of daily observations and lessons and urgent demands from varied quarters. At the same time, he must stay alert to his budgetary and review problems, know the scientific problems in his field, and link his work to broader concerns and a longer range future. These may alter the overall look and symbolic meaning of programs, but essentially they are peripheral to daily management of responsibilities. In short, a program manager is concerned with problem identification, program formulation with technical means for handling the problem and staff effectiveness.

With this understanding of the basic world in which the program manager must live we can list eleven fundamental questions with which he must be concerned.

—What are the overall problems?

—What are the programs and their goals?

—What are the responsibilities and the authority for carrying out the program?

—What is the size of the program and how is that determined?

—Where are its components?

—What kinds of people should run the program?

—Are there enough staff in the right places?

—Are there enough facilities, buildings, equipment, supplies?

—How effective is the staff work?

—What are the immediate performance and operational problems?

—What is the immediate outlook in these areas?

The program manager must make sure that operations stay within the budget and must have constantly available his own staff review of this subject. He may have functional planners and scientists to report on relevant trends and changes in basic knowledge, but these, while often important, are framing elements of the operation and not the thing itself. Such framing elements must receive attention at the higher levels of an agency, but they are only preparatory and facilitating for the purpose itself. It is the daily wrestling with the questions listed above, becoming familiar with them and ingraining responsibility for handling them that marks the program manager. He may well see and appreciate the needs for expenditure controls, for program review and evaluation, for planning and scientific endeavor, but these are peripheral. While others review, he must do.

A program manager may come in contact with planning through using his own personnel or through using a combination of his own and a functional body's staff and materials. This may occur through their assistance in goals identification, through their analysis of trends and basic knowledge affecting his field, or, most significantly in the immediate pressures for their assistance in distributing resources according to estimates of need and location. Although specialists in the field and public administrators in a program or agency always have a major responsibility for the first two avenues, the distributive function requires the use and development of different sets of tools usually found in planning hands. Thus problem identification and occurrence not only must be located in the present; they must also be related to general and specific characteristics of population, the economy, etc., and as these are estimated in the present and then projected they become a framework for governing resource demands and allocations.

These steps require that problem identification with appropriate measuring tools be linked to an inventory function and a general data base. Because a program manager rarely has the staff for all of these steps, he relates to the group that can assist him for the purpose — planners. Thus the resource allocation process becomes the major avenue linking program managers and planners. And most often the travel is oriented toward present and immediate future problems of distribution, for

this is the time frame in which an effective program manager lives.

IV. DISTRIBUTIVE PLANNING

Distributive planning, combined with community design, probably constitutes the bulk of planning work done in the United States. Distributive planning is the series of acts which relate specified events (like capital facilities investments, for example) to the distributive character of other events —such as present and projected population characteristics, economic transactions, transportation flows. Analyses of the relations among these data are in some measure the basis for decisions on resource allocation and distribution.

A word on the relation of distributive to functional and comprehensive planning may avoid confusion and provide perspective. Functional planning centers on the strategies for achieving goals and output targets while comprehensive planning working through functional plans and programs is centered on optimum system design for relational constructs which depict major aspects of reality—the physical environment, the economy, etc. Each type requires a working base in problem identification, and resource and event inventories and distribution patterns obtained through appropriate measuring tools. Each type must also reach a policy stage which includes recommendations on resource distribution in relation to event occurrences.

Since inventory and projection of distributive planning lead into functional and comprehensive processes, why is it necessary to separate it from the others? There are two reasons: first, much distributive planning is needed to allocate resources in current situations, a response to existing or immediate future situations. Intelligent use of resources in these circumstances puts men and materials where the action is. This happens continually in public administration and program operation, and very often program managers call for this kind of help through staff allocations or from planning agencies. Usually projections of future case and problem loads do not change the parameters of program definition or resources differentiation significantly, but if major changes are considered, the needs for new functional planning assistance as well as for distributive planning assistance become paramount.

Second, much of the work in planning agencies is of this type but the techniques of using these data raise major problems. Capital budget allocations can be input to handle projected distributions of people and activities, without specifying goals in terms of targets or output consequences. Instead there are often generalized policy statements which leave the relationship between input and output very vague. If this kind of planning is accepted, there is no further specification of the strategy and policy steps necessary for the greatest assurance of achieving goals and targets. This jump from a problem inventory stage to the policy stage, without the intervening steps of goal-target formulation and strategy for achievement, is quite common in planning. While distributive activites should fit properly into functional and/or comprehensive planning, in effect existing practice leaves out major tasks and strategic components of the planning process. We regard this as a starting phase, and a major one, rather than an end of the planning process. Essentially this kind of analysis is employed in current resource allocation and program management, not questioning the resources, the problems or the strategies, but accepting the givens and allocating according to what is there. Since the emphasis in both cases is on distribution of resources rather than on strategies for achieving objectives or on optimum system design, we call this "distributive planning."

It is important to distinguish distributive planning from the other types and to accept it as useful if it is employed correctly and if its limitations are recognized. First, program managers do need help of this kind to improve the allocation of their resources, and any planning program should provide it. Second, the distinction points up the validity as well as the shortcomings of much current planning. Making the clear distinction permits the establishment of requirements for these necessary phases of distributive planning — problem identification, inventory and projection — without confusing them with policy and strategy on the one hand, or with construct development and optimum system design on the other. However, it would also make it clear that program development should depend upon a functional or comprehensive plan-

ning process instead of proceeding from a distributive basis.

The route of distributive planning through the functional planning process has four major phases. The first is distributive analysis, with the problem identification, inventory and projection elements as a preliminary to the body proper of functional planning. The second phase emphasizes the setting of goals and output targets and examines the policies and strategies for achieving these. Significant elements are the delineation of programs and operating conditions for achievement, and the readjustment of sights through redefinitions of problems and resources. Requirements here would consider how well the planning process is being done in terms of making a plan. In view of these redefinitions, this phase would conclude with recommending a new distributive pattern. The third phase would examine effectuation processes — program funding and expenditure conformance with the plan. The fourth phase would be an evaluation, to determine whether output objectives are being achieved, to examine conditions that might be impeding achievement, and perhaps even to make a further impact evaluation of the program. The evaluation would include matching resources to problems and phenomena occurrences.

The comprehensive planning route also has four phases. First, but not necessarily, distributive analysis might be undertaken as indicated above. Second, emphasis would be on developing the construct, with concrete specifications of the construct, its components and the relations among them. The third phase would be optimum system design for future construct operation, including event distributions. This would need a designation of the elements and their relations in regard to the objectives. A proper account of constraints would be needed — political limitations, resources, and the inherent nature of the construct system. The fourth phase, effectuation, would specify the functional plans and programs needed to achieve optimum system design objectives, designate and establish coordinative mechanisms and finally working through functional plans and programs, examine effectuation processes and use evaluation techniques.

The information requirements for distributive planning comprise two major sets of data, one dealing with the present and one with the future.

Present data requirements:

—What are the problems to be handled?

—How are they recognized or described?

—How many problems are there, and how large are they?

—How are the problems distributed, by area, group characteristics, temporal sequence, etc.?

—What resources are used now for the problems, what facilities? staff? programs and events?

—How are these resources distributed in relation to problem occurrences?

—For present problems, what changes in resource distribution are recommended?

Future data requirements:

—What problems will have to be handled?

—How should these problems be recognized or described?

—What will be their amount or scale?

—How will they be distributed by area, group characteristics, temporal sequence, etc.?

—What underlying conditons are responsible for problem existence and distribution?

—What resources should be used for these future problems, what facilities, staff, programs and events?

—How should resources be distributed in relation to this future?

The overlaps and shortcomings of distributive planning should be noted. Many of the questions on distribution have faced program managers. However, in planning, distributive analyses have been confined largely to such physical concerns, present and future, as housing, population density, transport flows and capital construction.

This distributive approach of present and future needs, while useful as a base and guideline, has many shortcomings. It omits the strategic considerations of how to go realistically from the present to an indicated and desired future. It rarely treats strategy for achievement in the real world, or this remains implicit and untested by any criteria of reason or progress. Nor does the assessment of achievement, through measuring and evaluating program impacts, enter the picture.

Coordination with other programs requires other planning and governmental mechanisms beyond the confines of distributive work. Design coherence is not tested in relation to basic working environment and its major components, or is not stated as a consideration, or at best is treated superficially. Clearly, more planning development and methodology must supplement and complement the perspectives and foundations which distributive planning provides.

V. THE FUNCTIONAL PLANNING APPROACH

Functional planning may be within a program agency or in an interagency body covering programs within a specific field or, often the case, it may be a component of a general or comprehensive planning agency. New York State has had examples of the first two — the Department of Transportation contains and is the functional planning body in transportation, and the recently abolished Health Planning Commission was concerned with health-related activities and programs of many agencies. An example of the third type is the New York City Planning Department, which for many years has had a major role in planning and deciding on school construction.

The job dimensions of functional planning are so immense and complex that even its practitioners can be ambivalent and confused. A discussion of these roles, and of the core information available to each, can provide a clearer view of the problems, of the planners and of the people who deal with them.

A key concept in the performance of functional planning is "functional dominance." The realization of planning goals (obviously necessary if planning is to be useful), has several requirements for the functional planning process: first, setting goals and drawing plans in terms of achieving them; second, defining how to move from plans to goals; third, identifying the means for doing this; fourth, identifying critical events that must occur and milestones that must be passed, to reach the goals; fifth, identifying the operational conditions that allow these critical events to occur; sixth, assessing the steps needed to protect or create these operational conditions.

This deals with establishing the operational environments and the means that allow goals to be achieved. This is done by telling how to attain dominance over or to influence these operational environments enough to effectively employ the means to achieve the functional goals. "Functional dominance" is a shorthand for this process.

Roles of the Functional Planner

A functional planner, at least theoretically, has six major roles:

—Helping to define agency program responsibilities and goals;
—Reading future trends and conditions;
—Surveying knowledge in his field;
—Coordinating for program relations, duplications and gaps;
—Establishing functional dominance conditions for program achievement;
—Relating programs to comprehensive plan objectives and the converse.

As Agency Program Definer

The functional planner aids the program manager in defining agency program responsibilities and goals within his functional field, but he is not responsible for program operation or budgetary control. He assists in goal definition through his general knowledge of the field as related to the agency's responsibilities. He is advisor, elaborator and target definer for program managers because in his other roles he assesses the future and emerging problems and coordinates with other agencies and with comprehensive planning.

As Future Reader

A functional planner must read the future for social and environmental conditions, data trends, scientific, and technological advances that can affect his agency's responsibilities and goals and the ways it deals with them. This future scanning is a foundation for his advising program managers. Although he is often diverted to a time frame of the next one to two years, he should consider at least a five year frame — the span often needed to get programs going — and also look at longer range trends.

As Knowledge Surveyor

Reading the future or projecting trends requires a knowledge of current developments and an ability to evaluate scientific and professional work in the field. This survey is a foundation for viewing alternatives in reaching goals and for establishing the conditions of functional dominance, as well as for coordination and for evaluating purposes when developing or measuring tools. This begins to point up the value of closer linkage between science and planning.

As Coordinator

In his coordinative responsibility, a functional planner works with program managers and budget personnel. At one level he reviews his agency's programs and objectives in relation to those of other agencies, discovering duplications, opportunities for assistance or conflicts, and especially any major gaps which might neglect important groups or steps and so imperil the achievements of goals.

In budgetary coordination, functional planning becomes complex and detailed. It requires a recording and accounting system that can relate fund allocations to categories of programs and objectives — an analysis of each program and of its major components, providing several kinds of descriptors to be used as allocation cues. This permits a grouping of all programs with similar descriptors or an analysis of relationships between program inputs and outputs. For example, an education program may be keyed to an age group; or to the kind of education involved — reading, vocational skill, etc.; or by the kinds and amounts of program input — a teaching method, programmed equipment, etc.; or output results, in terms of reading improvement, obtaining and holding a job.

A descriptor system should be cued to adequate output measures, often missing because the art has not progressed sufficiently, scientifically or technologically. For example, the ability to describe health outputs for a population depends on an index to measure health changes. Health agencies are wrestling with this problem, but have yet to produce a satisfactory instrument. This lack seriously hampers functional planning, at the program coordinative and at the budgetary levels.

As Shaper of Functional Environments and Programs

A functional planner has the important and demanding responsibility for analyzing the operational environment of programs, so as to establish the necessary climate and structure of events for achieving agency goals. Failure to establish the nature of these conditions means traveling blind and risking a high rate of program failure. The functional planner must shape programs and environment to each other, determine the necessary and the feasible. He must compromise somewhere between the vital and the unlikely, on the program side, and determine the acceptable and necessary parameters of change on the environmental side, avoiding change which could damage the pursuit of agency goals. This is "establishing conditions of functional dominance."

This task requires a perception of the underlying elements which create and continue a problem. The interaction systems in which underlying elements are involved require understanding — the linkages among social, economic and physical environmental spheres and their components. By viewing proposed solutions in this context, one can trace ways in which they would be effective or ineffective and can further analyze consequences.

Ordinarily, a person entering an agency becomes accustomed to an already shaped relationship between programs and environments which is rarely questioned unless a major crisis or dissatisfaction arises. But when re-examination is required, this relationship is a key element. Its importance is emphasized again as central comprehensive planning objectives are to be achieved through functional plans and programs.

Another linkage is the scientist. To analyze and determine conditions of functional dominance requires a coherent understanding of the structure and nature of relevant events and human behaviors. Knowledge sometimes derives from everyday pragmatic observation, but it is also drawn from scientific work and theory. The functional planner shares the scientist's interest in basic phenomena but he does not have the scientist's job of finding their what and why. He does not create new knowledge, unless he does become a scientist, but he should use it to determine the environmental con-

ditions which are needed and possible for achieving agency goals.

As Relator to Comprehensive Planning

Another role is relating to comprehensive planning, especially since it must be achieved through functional programs. Assuming there is comprehensive planning, a functional planner must know how his agency program affects and is affected by it. The comprehensive plans become part of his working environment, presumably conditioning program activities and directions. Here he does more than secure conditional knowledge; his awareness of his agency's programs and their impacts are important inputs to comprehensive plans and goals. This liaison is not only transmitting knowledge; it provides assistance in shaping comprehensive planning through knowledge of the agency's ability to shape environment for achieving program objectives.

Major Questions in the Six Roles

These questions specify information needed for each role of the functional planner:

As Agency Program Definer

—What are the needs in this field?
—How do agency programs relate to meeting these needs?
—What are the relations among needs, programs and goals of the agency?

As Future Reader

—What trends will affect the levels and kinds of need?
—What conditions underlie the trends?

As Knowledge Surveyor

—What current methods is the agency using to deal with its responsibilities?
—What other methods are being used or suggested elsewhere, and how effective are they?
—What research is going on in this field and how pertinent is it?
—What other research is needed in this field?

As Coordinator

—How do agency programs and goals relate to those of other agencies in the same functional area?
—What overlaps and duplications are there among these?
—Are there conflicts?
—Where do these reinforce each other?
—Are there major program or responsibility gaps or omissions that will imperil achievement of goals?

As Shaper of Functional Environment and Programs

—What underlying conditions are responsible for creating and perpetuating the problems?
—What are possible solutions for these problems?
—What are the consequences of each solution?
—What intra-organizational conditions are necessary for making programs more effective?
—What changes in environment would make programs more effective?
—What changes are feasible?
—In accordance with feasibility, goals and responsibilities, what should the programs be?
—What measuring tools and systems should be used to evaluate program effectiveness?
—How effective are the programs?

As Relator to Comprehensive Planning

—What are the goals of comprehensive planning?
—How are functional programs related to and affected by the goals?
—How do these programs contribute to the goals of the comprehensive plan?

This delineation of functional planning roles explains some sources of confusion and conflict in this field. Their variety and complexity are demanding. They require flexibility, intelligence, versatility, toughness of mind and character about facts and events. The work requires an ability to get along with people, although often it is not understood, seen or appreciated. There is rarely time for all these duties; usually key information and perspectives are not available. On these grounds alone the functional planner's world is frustrating — effectiveness often depends on luck in developing and using an educated intuition.

Difficulty also arises in the use made of functional planners, especially in planning offices. Many people enter planning with expectations of helping to improve the world, at least in small ways. But the usual neglect of the fifth role, dealing with

the environment to establish conditions of functional dominance, maximizes disappointment and minimizes opportunities for professional growth. Adding to this, the frequent absence of any comprehensive planning increases frustration.

When these two roles are eliminated, a lower level planner often becomes a combination of statistics surveyor and purveyor, literature scanner, coordination "assistant" by attending meetings with agencies and helping to draw up lists of goals. Albeit necessary, these duties do not provide the integrative focus which makes planning meaningful.

Senior personnel also suffer from these lacks, but their higher position allows a different response. Here role and personal reactions converge to redefine function and change them into versatile program managers. They take on program manager responsibilities for resource allocation in the present and immediate future, without the operational authority or responsibility. The conflicts and rivalries which this often causes make program management personnel suspicious of planning. Many planners today are attracted by these generalized program management aspects, rather than by understanding and performing the planning function. The failure to understand planning, in theory or in practice, affects planners' data requirements and evaluation performances. As juniors they perform the clerical and office boy jobs of collecting numbers. As seniors, evaluation is defined in terms used by program managers, and the two groups compete for the same types of data which program managers typically require. With this competition and duplication, program managers feel that planners are only looking over their shoulders and checking up on them.

The relation of functional to comprehensive planning also causes confusion, especially when the functional planning is in a so-called comprehensive planning agency. Planners have been active in many functional areas, especially housing and transportation, and manage to get into most areas through exercise of capital budget responsibilities. When a comprehensive context is missing, the planning agency really operates at functional levels, with an overall data context like population or economic projections, as justification for its larger role. Usually these agencies' personnel are so busy on functional jobs — without doing the whole functional planning job as indicated above, that they don't have time for comprehensive approaches. Many professionals realize this situation and are highly critical, but do not know how to change because of situational rigidities and lack of knowledge of what exactly should be done. Thus they oscillate among various functional and comprehensive approaches to data and program evaluation, confusing program managers even more, with the result that all planners become equally indistinguishable and equally damned.

The needs of program managers in this context are another problem source. As the previous pages indicated, goal definition is shared with the functional planners, and there is an added strong need for managerial expertise in allocation of current resources to current problems. Often these are done as program planning. Where personnel are not available for these tasks the program manager calls upon the planner, invites him in, to help. Often, the planner not only helps with these tasks but adds two other elements. Because he deals with futures and relevant numbers, he begins to relate current distribution of resources to these futures. Thus he enlarges one aspect of program planning to a generalized sense of distributive planning encompassing both present and future resource allocations. Second, he may be attracted by the real powers of program managers for "doing" things, and thus begins to compete with him for direction of the effort. If the program manager is having difficulties to begin with, and is not doing any planning job at all, the conflict can become sharp. Thus these comments point to a need for providing program managers with personnel for doing resource allocation — distributive planning jobs, for both current and future periods. This can be done in a variety of ways; through attachment to a program manager's staff, or as part of the functional planning staff, etc.

With this discussion we can see why there has been confusion and conflict. The functional planner interacts with program managers, scientists and comprehensive planners. If he does not have clear understanding of the extent and limitations of his professional task, he slips into the roles of the others and competes with them. These situations are compounded by lacks in organizational clarity

and performance when program agencies do some functional planning and do not do enough of it or do it badly; when comprehensive planning agencies do not have sufficient comprehensive planning context and mix up functional and comprehensive aspects; when there has not been sufficient professional development in planning to work through the realization that comprehensive and functional planning are different and require different task assignments, responsibilities and organizational commitments. With these remarks, we turn to the analysis of the comprehensive planning approach.

VI. THE COMPREHENSIVE PLANNING APPROACH

For a long period the planning field developed as a general discipline without a serious attempt to differentiate kinds of planning, such as distributive, functional or comprehensive. Public administrators began to get at the distributive aspects in terms of current resource allocation problems in their work and teaching on program planning. In recent years planners have begun to talk about differentiating functional and comprehensive, but have yet to provide the grounds for doing so. This task requires specializing the operational methodologies of each, with concommitant analyses of their similarities and differences. The preceding section dealt with functional dominance as being at the heart of functional planning. Similarly, this section will define the operational and methodological core of comprehensive planning. This core is found in the basic representational constructs of major aspects of reality for which optimum system design is done.

From one point of view, existence is a seamless web of time-flow in which events become implicated, occur and are embedded. Aspects of man's psychological nature may have this quality, but in the working out of existence, major conditioning environments and scenes of action interact and powerfully influence the organization of behavior. Each conditioning environment and scene of action has many significant components. Analytically our understanding of the workings of the components results from our perceptions of similarities of characteristics with regard to their use, activities, interactions and from the extent to which all are seen as sharing reactions to forces among or outside of them. In turn these sharings of interactions result from strong linkages among the components. In essence, then, the construct defines a system of component relations of elements in the real world, each part strongly conditioned by each other's existence and influenced by the nature of the whole.

In this formulation, the constructs are not insulated worlds. They do influence each other, very strongly, as with economic-physical environment relations or those involving social groups and economic activities.

This paper discusses four major constructs with significant components — ones centering on the physical environment, the economic system, the social system and human nature. The following pages present some views on the development, and similarities and differences of comprehensive and functional planning arising from construct utilization.

Construct Development Problems in American Planning

In the United States, community design gave comprehensive planning its initial and most extensive impetus, largely through the architects and engineers who moved into the early practice of city planning. In the last quarter of a century, as planning has extended to economic and social as well as physical concerns, comprehensive planning could no longer be restricted to community design and the implicit methodological assumptions of its early practice had to be clarified.

Large increases in scale, intensity and diversification of interactions of people and institutions, with consequent growth in problem dimensions, have accompanied this expansion in subject matter. Government programs and management systems have grown correspondingly. If comprehensive planning had been confined to the physical environment problems emerging from these changes, its management tasks would be exceedingly complicated — consider the current problems in housing, transportation and pollution. The addition of economic and social components brought more uncertainty and confusion. Physical planners and community designers, accustomed to regarding population and income data only as need parameters for housing, community facilities and roads,

were pressed to incorporate social programs into their comprehensive planning. Lacking the working concepts and tools for comprehensive social planning, they responded along functional lines in relation to physical facilities and incorporated distributive elements. In the last decade the attempt to integrate physical, social and economic development has grown, especially in poverty, community and regional development and model cities efforts. But while the objectives may seem clear, the methodological requirements for the job are not, and problem solution has been hindered.

To progress from comprehensive physical planning approaches to functional efforts in social and economic areas, general planning agencies have moved in many directions to work with and accommodate other kinds of management personnel. Through functional and distributive involvements they have related to program managers, budget personnel and scientists. In overall resource allocation policy they have working relationships with top budget officials. At the same time their planning operations have combined distributive, functional and comprehensive approaches as a response to pressures arising from traditions of planning practice and the evolution and adjustments of institutional interactions among government agencies facing common problems. This mixing has had unfortunate results, especially in obscuring similarities and differences between functional and comprehensive planning and so confuses the kinds of planning jobs needed.

Similarities of Comprehensive and Functional Planning

Both comprehensive and functional planning must work with estimates of the future and analyses of underlying conditions. Both utilize distributive estimates about the present and emerge with projected and desired distributions of phenomena. Both must seek knowledge based on scientific study and methods relevant to the particular problem. Both analyze critical events that must occur if a program is to be successful. Whether or not the two are in the same agency, both must relate to program managers, although the mode of relation may vary considerably with the organizational location of functional planning. Finally, both must relate to budget agencies, although at different levels of concern. Two major results stem from these similarities and from the pressures to move comprehensive planning staff into functional planning to assist program managers directly. One is the dilution of comprehensive planning efforts until they practically disappear. The second is failure to differentiate functional and comprehensive roles, with consequent confusion for everyone.

Distinctions Between Comprehensive and Functional Planning

There are six major grounds for distinguishing comprehensive from functional planning. All six are based upon the first:

Comprehensive planning rests upon construct recognition and analysis, with ensuing optimum system design; functional planning upon producing a series of critical events that will allow program goals to be achieved.

Second, comprehensive planning is oriented toward end products of system being or existence; functional planning toward getting and providing program inputs that affect these states of being.

Third, because comprehensive planning involves major constructs each with major components, some strongly related to each other, its range of goals is broad and multi-faceted; relatively, functional planning operates on value grounds related to effectiveness of product delivery.

Fourth, comprehensive planning's broad mandate and its need to reconcile many competing demands requires many more political value choices related to basic necessities of construct being; functional planning puts relatively much more emphasis on means-end, how-to-do-it elements, although value choices also are involved.

Fifth, impact analysis and evaluation is a broader field in comprehensive planning, dealing with other components of a basic construct and other major systems; functional planning attention centers on impacts as they affect program objectives and the situational contexts required for achievement.

Sixth, coordination in comprehensive planning requires a much broader awareness of program and plan consequences in many and diverse fields; functional plan and program coordination aim at

creating and assembling programs to reinforce each other and achieve program goals.

Construct-Critical Event Differences

The four basic constructs around which comprehensive planning can be organized, with some major components of each to be discussed, are:

1. Human nature
2. Social structure and culture
3. Economic structure
4. Physical environment

There are major methodological and substantive implications in the idea that comprehensive planning should work through such constructs. Critical events and their necessary conditions are at the center of functional planning. In comprehensive planning, it is necessary to understand the essentials, dimensions, component parts and relations of the construct and the effects of environmental and program changes on its parts and the whole. Put together with the derivation of values through political and group study processes, the critical dimensions of construct existence give parameters that limit application of values in any one direction.

Each construct is significant for the others in many ways. For example, the economic structure and its components seriously impact physical environment, social structure and human nature considerations. Comprehensive planners should know the kinds and extent of these relations, even if they are specialists in one. Responsibilities for assessing the significance of constructs, their components, relations and suggested programs and impacts cannot be laid upon politicians alone. Comprehensive planners share the responsibility because of the understanding of human nature requirements they should gain in their profession. In essence, human nature needs are the grounds for evaluating the physical, economic and social structures. While a comprehensive planner should have a technical understanding of any or all these basic orders, he needs a special sensitivity to basic dimensions of being human. Thus if we regard health as a basic component and plan the physical environment, we must bring together three sets of information: one deals with components of the physical environment and how they relate; a second with the relation of this environment's parts and whole to health; and a third with evaluation of program impacts on health and physical environment.

This kind of planning has not been done in the United States, where it is common to omit human nature considerations, hardly deal with social structure and culture at all comprehensively and give some attention to economic structure and physical environment. Even these are often approached in terms of strong functional inputs such as tax subsidies and policy, transportation, etc., instead of through comprehensive planning.

To repeat the difference between functional and comprehensive planning: Functional planning produces a series of critical events that will allow program goals to be achieved; the program and goals become a focus through which critical events are perceived and defined. Comprehensive planning aims to produce optimum conditions for basic constructs of societal order and evaluates decision-making, basic systems and program impacts and the nature of human being, within the parameters provided by the sources of value. These differences require very different working methods, information requirements and evaluation grounds.

End Product Differences

Structural and operational integrity of major components of societal interaction is another basis for comprehensive planning and also a second way of distinguishing it from functional. Both types of planning consider the needs of all the people in relation to established responsibilities.

Functional planning relates these needs to the specific area of concern as the organizing frame for consideration and action. Comprehensive planning relates needs to major orders of existence as foci for bringing together inputs from many functional areas, and transcends them. These foci are central constructs, describing contextual frames of reality and giving both a scientific and common sense ground for understanding and analyzing human existence. In these contexts, functional planning and programs are inputs with effects of one kind or another. However, the sum of functions does not equal the whole, for the component re-

lations of the whole are the grounds for judging functional effectiveness and impacts. Thus the end product in comprehensive planning is organized around system being, while in functional the end product relates to a particular program.

Differences in Range and Breadth of Goals

Functional planning has a relatively narrow range of ends or goals; comprehensive planning covers a broad front. Although such functions as transportation, health or housing cover diverse phenomena and impact many facets of life, their major jobs are to deliver the functional products. In contrast, comprehensive planning centers around basic biological, psychological and societal constructs which depend upon varied private and public phenomena and functional inputs. Thus comprehensive planning has a variety of ends, some within the same person and all needing varying emphases and attention by many persons and institutions. Thus the value grounds for functional planning are relatively limited, for effective delivery of a product in a functional area, while comprehensive planning analyzes the multiple value consequences of private behaviors and government programs. This makes comprehensive planning more complex and difficult.

Program evaluation in relation to functional planning objectives can be relatively simple, dealing mainly with output phenomena in the one area. But comprehensive planning must do multiple evaluations for multiple phenomena, some of which may be positively and some adversely affected. The values involved can hardly be added and subtracted — probably they are incommensurable. The acceptance or rejection of results must rest on considerations beyond planning and management systems — in short, on political goals.

Differences in Emphasis of Means-End and Value Methodologies

A basic difference of methodology is the fourth distinction. With a narrow range of goals, planning is likely to emphasize the means to achieve them, using rational analysis and logical coherence to establish a means-ends system. For example, only so much can be done to better health conditions within a given period. Once the value choice is made on which client groups to help, planning methodology centers on rational or logical analysis of how best to do the job, estimating constraints and which events are critical to achievement of goals. This is the major emphasis in functional planning.

Given this complex society, with varied institutions and people having different interests and desires, comprehensive planning must reconcile or accommodate and in some way balance competitions and conflicts. In this situation, comprehensive planning has direction from two sources: the political arena and the structural and operational integrity of major components of societal interaction. The political arena provides it with many values and sources of direction, primarily the policy decisions of the chief executive and his major advisers.

To choose among the many major policy statements which a chief executive is required to advance, consultation with the chief executive should determine which shall have the major thrust for comprehensive planning. Similar problems arise in regard to the legislature. Public opinion polls and the news media also express public concerns which politics then reflects — current concerns about pollution, for example. In these processes, sensitivity to sources of value determination and working arrangements to use them are most important. "Rational action" in relation to the logic of means-end arrangements is definitely secondary here.

The second source of direction for comprehensive planning is the structural and operational integrity of major components of societal interaction. Each construct defines a major realm of existence with specified components and relations for a given period and society. Any action that destroys or seriously diminishes a component has serious consequences throughout that system and affects other constructs as well. Examples of this are problems of environmental pollution, poverty and the powerlessness of various groups.

Thus, like the political system, the construct realms provide value parameters which confine or direct the impacts of public or private programs, so that basic existence requirements continue. Of course constructs can be shattered — societies have been destroyed — but normally the constructs

serve as general value guides. Thus as noted earlier, while functional inputs affect these constructs, the focus of concern is with the construct and its components in comprehensive planning and not directly or solely with the functional program.

Differences in Impact Analysis and Evaluation

Functional planning's concern with program impact, centering on achievement of objectives, has two dimensions, dealing with program objectives and with the situational context for achievement. Functional planners and program managers often deal only with the first and neglect the second thus opening additional avenues of threat to the program. For example: after the United States had sent a half million troops to Vietnam, General Westmoreland requested 200,000 more. Advisors to President Johnson believed that political repercussions would mean domestic defeat of the war effort and urged the President to deny the request. This illustrates how impact analysis by functional planning must consider contextual support systems as well as objectives.

Comprehensive planning has a much broader role in impact analysis. A comprehensive planner needs to know the functional goals and program achievement, but he must also consider other components within that basic construct and other major systems too. For example, health conditions can affect a person's sense of identity, his ability to love and to be enriched by experiences — all this within human nature dimensions. But health also affects the ability to earn a living and is influenced by characteristics of the physical environment. In dealing with one program evaluation, a comprehensive planner must refer to major dimensional systems within which people live.

Coordination Differences

These broader impact concerns in comprehensive planning mean different coordination requirements too. Functional planning, where coordination should create programs and bring them together to reinforce each other toward program goals, avoids program conflicts. The sometimes substantial problems of program duplications and overlaps are classed as efficiency and budgeting considerations.

Comprehensive planning uses more sophisticated and demanding coordination skills:

- Understanding of the directions and/or dimensions of optimal being for basic systems of existence, such as physical environment, economic and social structure and human nature;
- Knowledge about the relations, impacts and effects of components in these systems upon each other;
- Knowledge of functional program impacts in relation to these.

Comprehensive planning coordination assimilates functional planning coordination knowledge, but its performance is related to different ends and rests upon other perceptions and analysis of the real world.

New community programs offer a clarifying example. Normally a comprehensive planning agency would establish needs, locations, dimensions and timing of such programs; once these are approved, an operating agency would undertake construction. Obviously this planning concerns public capital investment, housing policy, transportation, population growth, distribution pattern and employment — matters important to a new community development agency as part of its functional planning, for their potentialities and problems for new town development. The coordinative effort of functional planning is to bring these elements together so that development can go forward with maximum benefit.

In terms of the three coordination requirements above, how should a comprehensive planner relate to a new towns program? First, he should conceive a new town as one response to problems emerging from basic dimensional systems — such problems as, in the physical environment, settlement patterns, community types, housing construction, ecological balance; in the economic order, employment, growth, productivity, working environment; in the social system, life style opportunities. And all of these diversifications and variations of environment can affect the human nature considerations of health and enrichment experience.

Second, the perception of these impact potentials rests upon knowledge or insight on how components will interact. For example, a new commun-

ity of 250,000 based upon research industries and so requiring a highly trained labor force may not prosper without cultural and educational facilities. This aspect is tied to the functional planner's concern for new town potentials, but it is also part of the comprehensive planner's concern with the role of the new town and its specific economic structure in providing grounds for development of such facilities. Would they occur if the town was not developed? Would they be as good without it? Is this the best way to get and locate such new facilities and programs? These questions for comprehensive planning are not within the province of the functional planner.

Third, as the development agency proceeds with building and towns come into being, the comprehensive planner must keep alert to their impact on basic systems, especially with a series of new towns having a sizeable impact on the whole of society. In any case, comprehensive planning should ask the questions listed for all four systems, obtain evaluations, reassess program scope and provide direction.

The coordinative tasks of comprehensive planning are indeed different, if not more complex, than those of functional planning.

Comprehensive Planning Constructs and Some of Their Major Components

Now for the analysis of major constructs, their components and use. No claim is made for completeness; other constructs and/or components are useful for other work. The intention here is an illustrative ground for proceeding with comprehensive planning, drawing upon some of the more familiar materials in physical planning, the economic and social sciences and psychology.

Comprehensive planning initially would proceed through identifying the construct and its major components. This process might identify a physical environment construct with components of building, settlement pattern, area types, ecology. With measures of each component to be developed for use against evaluation criteria to judge critical and/or desirable situations — also needed is an understanding of the components' interrelations. These understandings, insofar as they can be gained, would be a basis for an optimum system design for the construct. The design should consider the values and resources of the people and agencies involved, and specify the state of the system or construct and goals to be achieved in a given period. Finally, while each construct has its own major significance and influences the others, the relations to human nature and being must remain the basic grounds for evaluation of all.

Comprehensive Planning for Physical Environment

Planning for the physical environment has been the most advanced work done in comprehensive planning, with major effort on aspects of community design and the physical growth and patterning of city and metropolitan regions. While a fringe group has been concerned with the natural environment in broad regions, only recently has widespread pollution made ecological balance a central concern of planning.

Some highly visible physical components like housing and transportation, in themselves large functional planning and program areas, have been the subject of major government actions and investments. Yet, even in these most advanced areas, large and expensive construction has often gone ahead while lack of abilities and resources have precluded doing either functional or comprehensive planning. Although city planning and architectural schools teach physical environment component relationships, these still are not well defined nor are their relations to human existence and interaction understood. Thus, without adequate frameworks for evaluation, attention and credence have been given to the program managers in the physical development field, who at least can deliver a specific, visible product in a specified time.

Comprehensive Physical Planning Components

Six major components of physical environment are listed. They should provide a beginning for seeing environments and the impacts of plans and programs upon them.

SETTLEMENT PATTERNS—How people are distributed by state, regional, urban-nonurban or other significant areas.

AREA TYPES—People's residential, work, recreation and other local environments.

BUILDINGS—The buildings in which people live, work, do business, etc., classified by their condition and other significant characteristics.

TRANSPORT—Facilities for moving people, goods, services or utilities.

COMMUNICATIONS—Facilities for transmitting messages and information.

ECOLOGY—The relation between man and the natural environment.

As noted, tools can be developed to measure and evaluate the desirability of each component and its potential for development.

Comprehensive Planning for Economic Structure

Economic planning has been the second most advanced of the comprehensive planning efforts, partly because land demands for economic activities are closely related to physical development. Further, the economic orientations of governments have sensitized them to business needs and to income and employment demands.

Still, most economic programs do not result from planning but from pressures of the moment. At best they use segments of what might be functional or comprehensive approaches, or both. Probably no city or state has coordinated such matters as long-run income distribution, industrial and occupational structure, space distribution and the consequent land, resource and transportation needs, manpower supply and skills and development programs. Carried further, the economy's organization and needs must be examined — the operating economic environment, laws and mores and relations to social and physical development needs.

While it is important to know about basic structures, the results of structural operations and of related programs must also be seen for their significance to people and organizations. The five comprehensive economic planning components listed are a few which offer basic approaches to measurement and evaluation.

Comprehensive Economic Planning Components

PRODUCTION—The extent to which people's activity adds to the economy.

PRODUCTIVITY—The units of output per unit of effort.

EMPLOYMENT—People's status in the labor market.

INCOME—The receipt of money or income in kind.

JOB SATISFACTION—The extent to which people enjoy their work.

Comprehensive Planning for Social Structure and Cultural Systems

The problems of social structure and cultural systems are the subject of much writing, considerable talk, some relevant program actions and little or no planning. Attention has been the greatest on problems of poverty and minorities, crime and narcotics, and alienation of various groups from society's values as expressed through the business or government establishment, and the response has included many specific programs.

From the functional point of view, it is difficult to define how much and what kind of planning, if any, has gone into these programs. Perhaps most have followed the program management characteristics outlined above. While specific problems may have spurred some functional planning, it seems that comprehensive planning on social structure and cultural systems has not been done at all or at best has been rare.

This omission is not surprising. In the United States, any kind of social planning is recent. Social ills have been in the jurisdiction of professionals who, within their specializations, have been program oriented — the social workers, educators and psychologists, for example who run the poverty programs. These specialists have not brought together the structural implications for work organization arising from the practice of planning or from the advances in sociological analysis which have distinguished social structure and cultural systems as basic contexts for studying and understanding behavior. True, social workers and psychologists

have known and used some sociological advances, but mainly to shed light on problematic material. As in other functional fields, attention has been on the program, not on characteristics of social structure and cultural systems. At times, segmentally, work like Moynihan's on the Negro family have shed light on system operation.[1] Thus while much sociological analysis is at the general structural level, government programs are generally not and planning is not.

Five components for analyzing social structure and cultural system operations, listed below, indicate the importance of using this context in the relatively unexplored area of comprehensive social planning, despite the many difficulties.

Various measurement and evaluation tools can be used and developed for each of these components, and their results can provide important insights into the workings of society. It is important to note too that many of these interact with each other, and that a change in one easily may affect the others.

Comprehensive Social Structure and Cultural System Components

OPPORTUNITY-CLOSURE—This component deals with chances in society for access to material and psychic rewards, and requires examination of how access is opened or blocked.

COMMUNITY-ALIENATION—This component deals with people's commitment to the values and preservation of society, and requires examination of forces which might help explain relevant behavior.

FREEDOM-REPRESSION—This component deals with the extent of freedom of behavior and expression, and would require examination of what happens in these respects.

PROBLEM SOLVING RESOURCES, PRESENT-ABSENT—This component deals with society's problem solving resources when individuals and groups cannot handle problems on their own and need help.

POWER-POWERLESSNESS—This component deals with the extent to which some persons or groups have power and others do not.

Comprehensive Planning for Human Nature Factors

To deal with the idea of human nature, and comprehensive planning's relation to it, seems tenuous. Human nature has been discussed, analyzed, researched for centuries, with substantial disagreements. Tools for analyzing specific elements are highly suspect, as, often, is designation of the element itself. In fact, how does one do comprehensive planning in relation to human nature? Granting major problems, one might retort, "How can one evaluate comprehensive planning without knowing its effects on human beings?"

Recognizing all these uncertainties as well as the needs, we have selected some components to reflect basic concerns about human existence, some more amenable to measurement than others. Opening up this area for discussion, work and progress will reveal how these factors reinforce each other and how various structural orders and progams in physical, economic and social fields affect them. This learning will produce relevant information for program and planning modifications. Professionals with other needs will stress other components — for example, educators might wish to examine aspects of cognitive development which are not included below.

Comprehensive Human Nature Components

HEALTH-DISEASE—Physical and emotional well-being.

IDENTITY-LOSS OF IDENTITY—Self-feeling, esteem, awareness of self.

LOVE-HATE—Regard for others.

ENRICHMENT-DESTRUCTION—The growth or loss of the capacity to deal with the world and the self.

SECURITY-ANXIETY—Feelings of ease or worry about the present and future.

FREEDOM-RESTRAINT—Feeling and behavior in regard to ease and scope of self-expression and self-realization.

General Information Questions

Given these constructs and some of their components, the problem remains of relating govern-

[1] U. S. Department of Labor, Office of Policy Planning and Research **The Negro Family**, Washington, D.C. U. S. Government Printing Office, March, 1965.

ment programs to them and evaluating results. Six questions about a program in relation to each component can suggest a solid ground for evaluation.

CREATION—Does the program create or add to the component? If so, how?

MAINTENANCE—Does the program help to maintain the component?

TARGET GROUP—For whom is the program intended and how do they relate to the component?

LOCATION—Where will the program take place and how does this relate to the component?

ACCESS—What changes will be made in rules or regulations, formal or informal, which govern the ability of groups or individuals to relate to the component?

TIME—When will the program start and how long will its major impact on the component be felt?

With these questions, each program can be analyzed for its relationship to important concerns of comprehensive planning. Further, instead of the single or limited evaluation system characteristic of functional planning and program management, comprehensive planning would subject each program to a multiple goal, multiple information analysis based on constructs and components. This approach could gain significance by aggregating impacts over time, so that over the years small programs might be more important than more highly publicized large single programs.

Eight Roles of the Comprehensive Planner and Related Major Information Questions

With this discussion of constructs and components we can define the comprehensive planner's tasks in terms of eight roles.

—Defines and designs optimum conditions for basic constructs and sets targets, programs and means for realizing these conditions.

—Assists political leaders in setting societal goals in terms of basic system needs.

—Helps political leaders and budgetary officials to decide resource allocation for achieving societal goals.

—Coordinates functional plans and programs to achieve societal goals in terms of basic system needs.

—Indicates and develops dimensions for measuring basic systems and their components.

—Estimates future states of basic systems and their components.

—Evaluates the consequences for basic systems of private actions and public programs.

—Scans scientific and professional fields for information pertinent to basic system design and needs.

Major questions are related to each of these eight roles:

As Optimum System Designer

—What basic systems should he be concerned with?

—What are the major components of these systems?

—What are the relations among components and systems?

—What are the optimum conditions for each system, given present knowledge?

—What targets should be set now for realizing optimum conditions?

—How shall the targets or goals be achieved?

—What underlying conditions create, maintain and perpetuate system problems?

Optimum system design is the sine qua non of comprehensive planning; without it, related activities lose their meaning or are impossible except as inputs to functional planning and programs. Because this role often seems Utopian, it appeals to certain persons and is derided by others. Its Utopian tendencies must be tempered by a sense of the possible in a given time: setting targets according to available resources, means and political frameworks is a necessity for setting priorities and moving on to implementation.

As Societal Goal Definer

—What societal goals and targets are indicated by basic system needs?

—Are these acceptable to various publics?

—Do these fit executive, legislative and bureaucratic perspectives and goals?

—Consequently, what comprehensive planning goals and programs should be recommended?

This role, based in the former role, is a major factor in target setting. Knowledge of the attitudes, responses and needs of people and government which limit action suggests what can be achieved and what targets and implementation can be recommended. But when major needs are at odds with public or governmental attitudes, the planner must make these clear and recommend ways to deal with the discrepancy.

As Resource Allocator

—What total resources can be allocated?

—What totals of needs must be met?

—Which needs have priority for fulfilling societal goals?

—What resource expenditures are required for priority needs?

—What allocation of resources is recommended for meeting needs?

Here the planner surveys basic system needs and targets in relation to resources. While there are many claimants for resources, the comprehensive planner is among the few who can view all these claims against the overall pattern of needs for achieving societal goals. Working with budgetary officers and others in the executive office, he advises and recommends, for executive and legislative approval, a resource allocation program—money, goods, facilities, personnel — to do the job.

As Comprehensive Plan Coordinator

—Which functional plans, programs and trends will help to achieve basic system goals?

—Which functional programs, plans and trends are acting against them?

—How can programs reinforce each other to achieve comprehensive plan goals?

—What omissions or gaps need to be filled to reach the goals?

As Developer of Comprehensive Plan Indicators

—What measures can best indicate comprehensive plan achievements?

—How shall these measures be used?

—Lacking direct measures of achievement, what surrogates might be used?

—How could direct measures be secured?

The task is to measure progress towards comprehensive plan goals. Without measurement, this evaluation is difficult and at best impressionistic. Some areas, such as the economic, may have much better data; and some physical components, such as housing and transportation, have masses of data. But the social system and human nature areas, and relations among components, may for a long time need surrogates and new measuring tools.

As Future Reader

—What trends will affect basic system needs?

—What underlying conditions are responsible for these trends?

Here, comprehensive and functional planning tasks are similar, but the first is oriented towards basic systems and their components and the latter to specific programs or functional areas. Consequently, each needs very different signs or measurement estimates of the future, although they may share common data such as population, jobs and housing.

As Impact Evaluator

—What impact do public programs and private activities have on basic systems?

—What are the consequences of these impacts?

—What kind of program responses to impacts could achieve system goals and targets?

As Knowledge Surveyor

—What current methods deal with basic system problems?

—What other methods are suggested or are being used elsewhere, and how effective are they considered?

—What ongoing scientific research is pertinent to solving basic system problems?

—Is this research being used on these problems?

—What other research is needed?

In this capacity, the comprehensive planner's role is similar to the functional planner's.

Distinguishing Functional, Social System and Human Nature Components

We turn now to some confusions about social system and human nature components. One problem in arriving at constructs for comprehensive planning is to distinguish functional, social system and human nature approaches. There have been confusions of focus, often mixed in an amorphous grab bag. One focus identifies a major problem area, such as poverty; a second analyzes institutions and how their behavior correspond to some functional types of analysis; a third focus is on the idea of man, his qualities and ability; a fourth focus is on social interactions and the extent of "good" or "bad" relationships; a fifth focus rests on calling certain functional inputs "social"

The line of solution presented here has relied on sociological and psychological theory which recognizes relations among social system and human nature components but keeps them analytically distinct. In functional areas, however, we find a breakdown of conceptual clarification, for it is a widespread practice to depict specific ones as social — housing, education, welfare.

This approach has viewed social and individual gain in terms of gains in housing, education, etc. The result is that program indicators become "social indicators" and at least program management and at best functional planning come to the fore and social system and human nature constructs are ignored as bases for comprehensive planning. Further, in describing the functional as "social," it is hard to tell where to stop. If one component can be defined this way, why not all? Do not natural resources, transportation, economic development sometimes have as much "social" significance as housing, or even more?

To consider every function possibly "social" and to have no clear way of separating the two is operationally untenable. A resolution for this problem is advanced, based on differences between "being" and "getting" — What a person is is part of his nature, what he gets is a functional input with more or less significance for his being. The same sense of "being" is true for social system qualities, although in different dimensions. In identity, a person is. He exists in his relatedness or alienation from his community and the world. He loves or hates in varying degrees. Experiences in living do or do not enrich him. He is or is not healthy. These are qualities of existence — based upon being an organism biologically and psychologically, and in relation to his perception of social system environment.

On the other hand, while education, for example, is important to identity, it is something a person gets. Transportation is important to opportunity systems, but it is also a means, a functional input for the system, not the thing itself. For social system and human nature areas even housing and jobs also are things acquired as inputs, not what a person is; nor do they describe the system dimensions in this area. Only by distinguishing qualities of human and social system being from acquisitions can one examine relationships among such components and understand their concordance.

Of course some functional areas appear as components of constructs. For example, health in the human nature sector, housing and transportation in physical environment, and everything in the economy construct stem from functional areas. But this does not invalidate distinctions of functional and comprehensive planning grounds. While some functional components are part of comprehensive constructs, they are only parts and not the whole. Neither housing nor transportation is the environment; they are important components of it. Health is not the human being, but an important component of being which is affected by inputs.

The construct is the center of attention; functional inputs are recognized in their contribution to the overall order of being. For evaluating programs, constructs and their components are grounds for assessing consequences, and because there are significant interrelations, assessment of programs must take these into account. On these grounds, the functional is not a sufficient basis for comprehensive planning, and the distinctions between being and getting, between construct and functional as bases of program evaluation only point up additional differences between the two.

A Proper Role for Social and Psychological Factors in Planning

The construct system opens the way for social and psychological factors to enter planning and

management evaluation. Whenever planners said that they had considered social factors, they referred initially to body counts, with some racial and income breakdowns. Later, they accounted for the "social" by pointing to planning housing programs, education construction and occasionally health facilities — in short, the capital construction approach. The social system with its cultural values as a subject for planning analysis never entered their minds. Dealing with psychological factors, especially a generalized concept like human nature, was regarded as somewhat philosophical and Utopian, perhaps too daring and radical for proper planning.

Not until the 1960s with its surging emphases on poverty and race did these factors, especially the social, find their way into planning. Even then there was strong resistance to social programs and often these were transformed into programs for physical development — a practice abetted by the tendency of professionals in social work and education to deal with social factors as programs which were more economic than social in orientation. Even these diluted "social" programs have had a high mortality rate; manpower training programs, for example, because they lacked the necessary knowledge of relevant social and psychological factors and systems.

Further difficulty has stemmed from a failure to integrate these "socio-economic" programs with economic structure analysis and planning. Professionals in these "social" fields have not utilized the system or construct bases of knowledge available from academic sociology and psychology. Instead they have designed a series of programs mainly to support people in economic terms, giving the necessities directly or by transferring money. These objectives, worthy as they are, are social only to the extent that any economic program has social consequences. Calling the economic "social" or having "social workers" to administer economic programs does not change the basic phenomena.

Another consequence of planning's failures to incorporate social and psychological concerns in terms of their own relevancies has been confining evaluation perspectives to input factors — not surprisingly, for without measures of man as a foundation for end-product terms, factorial combinations about efficiency and economics become the lingua franca of evaluaton. When this happens, however, the concerns are "budgetary" and the contributions of planning to evaluation disappear.

In these circumstances, people with a social science background have never been comfortable in planning — nor have physical and economic planers been comfortable with them or able to relate social science and psychological knowledge to planning. It has been easier to study planning as an institutional activity from the sociological or political science perspective — just as one could study religion — than to use that knowledge in ongoing planning. Social scientists who enter planning have always faced problems in translating their knowledge into physical or economic development terms.

With use of the idea of basic constructs in social and psychological as well as in physical and economic fields, this situation should change. These fields should take their proper place in comprehensive planning as objects of analysis, evaluation and system design and appropriate staff effort should go into these areas. This opens the way for promoting these elements from their peripheral status to main concerns of planning. Translation between fields can become two-way, with physical being evaluated by social consequences, for example, and vice versa. This provides a human nature consequence perspective for management evaluation, which can be shifted beyond considerations of budgetary efficiency to concern with final products. This makes comprehensive planning increasingly important in management and evaluation.

Without a construct base for optimum system design, these results will be much harder to achieve. These are the reasons for this detailed analysis and description of a comprehensive planning operation. With recognition of comprehensive planning and its potential advantages, although they are difficult to secure, the job of governing can become more secure and relevant to social and individual needs.

Where and How Can Comprehensive Planning Be Done?

Given the complexity of comprehensive planning it is natural to ask "Where can it be done?" and "How can government executive power use it for managing?" Proper comprehensive planning requires new planning constructs or systems as well as improved old ones. It requires the elucidation of significant elements in these systems with analyses of their interrelations — a relatively new procedure. It needs new measuring tools for evaluation of progress. This requires four major steps:

—Basic system identification with optimum design.

—Identification of major components within systems.

—Knowledge of relations among components.

—Criteria or indicator tools to measure and evaluate progress.

This schema provides a direction to the need for policy coordination along interfunctional lines. Programs can be coordinated in relation, not only to each other, but to multiple dimensions of need established in basic construct systems, with determinations of component priority. Answers to five questions indicate how this kind of comprehensive planning can be done:

—Does the knowledge exist to allow comprehensive planning?

—Can relevant knowledge be obtained?

—What organizations or persons should do these jobs?

—How can this knowledge be introduced into planning?

—How can comprehensive planning be done during the time consuming process of obtaining and disseminating knowledge?

Does the Knowledge Exist?

For some components there is a relatively great deal of knowledge and data — numbers and characteristics of people, transportation, housing, jobs, etc. — although gaps remain. For such components as job satisfaction, ecological balance and social system and human nature elements, knowledge is piecemeal at best and is especially scarce in relation to planning. Certainly each field, in its books, journals, and reports, has many relevant pieces which should be assembled, evaluated and fitted into comprehensive planning constructs. Knowledge of relations among components offers poorer fare. For constructs, such as physical environment, standards for some relations, like housing-transportation, show evaluations of experience and resultant applications. There are other examples of inter-system component knowledge, relations of education, an enrichment experience, to productivity and income. Generally, many questions are unanswered about component relations within and among systems. Knowledge about relations between aspects of human nature and forms of settlement such as the city have not been handled well scientifically although there has been much generalization.

Knowledge gaps are serious for basic constructs as a whole and design of optimum systems. Perhaps most knowledge is available on economic system operations, although present problems with inflation and unemployment indicate remaining difficulties. For physical environment, recent emphasis on ecology and pollution show how unaware we have been. Use of knowledge and design for social system and human nature constructs has been negligible.

Thus we do not have the knowledge to do overall comprehensive planning today. But we do have knowledge in some areas, about some components and relations, that help us to do some design and to take some policy directions. With luck, recognition of our needs and will, we can do more.

Can Relevant Knowledge Be Obtained?

Knowledge relevant for planning will be extremely difficult to obtain. While interesting theoretic construction or model building has been done in the social systems area, little of this has been appearing in planning effort and evaluation. One recent exception was New York State's Office of Planning Coordination work toward a central social environment study — although its validity and practicality must still be tested — with an interesting design system portraying opportunities for an individual to participate in society and share its rewards.[2]

2 CONSAD Research Corporation, **The Design of a Central Social Environment Study,** Unpublished report prepared for New York State Office of Planning Coordination, Albany, New York, 1970.

The essential first step is knowing what knowledge is needed and wanted. As our universe can be validly perceived in terms of relational constructs and components significant for human behavior, and as we have grounds for indicating desired knowledge, by knowing where to look, we can determine how to look, and then assess the information gained. However, without a construct frame of reference, everything and anything becomes valid data, according to pressures from many sources.

With constructs as a frame of reference, we can begin to order knowledge and searches for knowledge in relation to them. One task is to scan existing knowledge for its relation to constructs and components, a second to acquire new knowledge in areas of ignorance. Ordered effort may require changes of reference frame in regard to constructs or components, but as a start, it is most important to provide an ordered ground for inquiry, knowledge acquisition and organization. The comprehensive construct formulations presented here are such a starting point.

Such an effort would be diverse and carried through various instrumentalities: consultants, experts, think tanks, universities, professional and scientific organizations, private business, as well as various government personnel and agencies.

Who Can and Should Do Comprehensive Planning?

The complicated needs for comprehensive planning can be classed in two major sets:

—Knowledge acquisition activities.

—Optimum system design.

In the present state of the art, there are major problems of who can and should do these, varying according to the degree of knowledge and practice now available for the four system constructs, and with scale, effectiveness and control possibilities for each. For example, economic and social planning may be most effective at larger scales, with a minimum state region setting, as a framework for organizing programs. On the other hand, physical and human nature aspects of planning may require a more intimate scale for effective program administration in addition to larger scale visualizations of problems. The matter of varying scale according to the needs of program operations should be tested.

The growth of technique in community design gives further insights into who should and can do comprehensive planning. The ability to do community design, in small towns, large cities, regions, states, etc., depends upon several sets of institutional events: national networks of architectural and planning schools with courses on neighborhood and community design, and the transmission of relatively standard approaches to design and component relationships.

These become embodied in works on standards and basic approaches like the American Public Health Association's "Planning the Neighborhood," DeChiara and Koppelman's "Planning Design Criteria," the American Society of Planning Officials' planning advisory service publications, the Urban Land Institute's technical bulletins, etc.[3] They center on physical design elements and their relations, although on occasion, especially ULI publications, they deal with economic analysis data and methodologies.

A third approach is through activities of professional societies. National, regional and local conferences, meetings, publications, reports, newsletters, etc., create a climate for exchanging information, surfacing new ideas, concerns and dissents, indoctrinating members, students and attendees, etc. A fourth setting is through federal and state funds for planning programs. Through their requirements for planning performance which introduce standards for work elements and methods of analysis, these programs have spread some common perspectives to planners throughout the country.

With the spread of institutional networks, physical design has gradually expanded into new areas. With greater common experience, design stan-

[3] American Public Health Association, **Planning the Neighborhood.** American Public Health Association, 1960
[3] DeChiara, Joseph and Koppelman, Lee E., **Planning Design Criteria.** New York: Van Nostrand Reinhold Co., 1969
[3] American Society of Planning Officials, **ASPO Planning Advisory Service.** Chicago, Illinois.
[3] Urban Land Institute, **Urban Land.** Washington, D.C.

dards have become less rigid, with more variation in design, mixture of densities, and uses. Old standards, like those for light and air, have been improved; performance standards for building codes, water, air and noise pollution, etc., have been introduced; and environment concepts have enlarged from neighborhood and city to region and nation.

Design ability has grown through gradually establishing interlocking institutional nexuses, which reinforce each other and provide machinery for developing and transmitting knowledge. However, the workings of this machinery are often hit or miss, partly because the nature of planning processes is imperfectly understood.

At a national level, theoretic and practical machinery for optimum system design for economics has been developed relatively highly, but the area of economic relations to physical, social and human nature components is a wasteland of ignorance, error and neglect. Regional and smaller area economics has received theoretic work in universities but this is apparently far from a working optimum design system. At best the region may be seen as a segment of the national economy, using the same income, productivity, production, etc., criteria for measurement and evaluation. The federal government has funded major efforts in California and New York for information bases and statewide econometric models. Current attempts at economic base and industry location studies are only a part of system needs and must be supplemented by considerable data on economic relations.

The overall picture of comprehensive planning in the economic area is this: In national policy, there is a strong theoretic, academic, professional society and working organizational base for knowledge acquisition and optimum system design, although much more work has to be done; regionally, the theoretic and knowledge base is weak, with beginnings only of professional and academic networks of organization, sketchy and intermittent practice, and available tools not yet proven out. In short, the regional work has been immediate and pragmatic, oriented to problems and individual programs.

In the social system, strong theoretic development has occurred in the past 25 years, with growth in academic and professional society bases for exploration and knowledge acquisition. But little if anything is found in optimum system design, especially in relation to planning. While social perspectives have permeated social work, psychology and education, these efforts have been problem and program oriented. Only with perception of minority group problems as system related have these workers begun to use sociological knowledge, and that sporadically, although there have been recent efforts to set up organizations for more comprehensive work in such areas. Such recent federal studies as those on violence have tended in this direction.[4] A comprehensive system approach is emerging slowly, but planning organizations have not joined in and remedial proposals seem directed to program and problem, without a sense and strategy for system design.

Despite the profusion of studies, ideas and insights in the whole human nature area, despite the strong academic and professional bases for study, exploration and practice, problems of optimum system design and component identification as well as measurement difficulties, remain formidable. The construct components offered in this paper are intended as a basis for exploration.

Two components that appear frequently and strongly in organized institutional settings are health, through its many associated programs and facilities, and enrichment, through the whole complex of educational activities. These appear most often in program settings, with occasional and partial functional planning which is often oriented to program management. Comprehensive planning for overall human nature needs is non-existent. Planners and practitioners in this area are not plugged into each other. While academic and professional settings for human nature study exist on the knowledge acquisition end of the spectrum, the optimum system design and planning part does not exist.

Given this picture of comprehensive planning, what can we expect and who should do it? In the physical area, we can expect more of the same, local, regional and state organizations working at

4 U. S. Riot Commission, **Report of the National Advisory Commission on Civil Disorders.** Bantam Books, 1969

small and larger scales of affect, and regional management extending into environmental pollution and land use control. For the economic system, we can expect more of the same, with continued work on improving system design settings for regional and state economic development. We may get some construct linkage development from economic to physical environment and human nature systems through evaluation measures for industrial activity, environmental pollution and health. The opportunity component of the social system may be linked more firmly to employment components of the economic structure. These activities will likely be more successful at state, regional and large metropolitan area scales than at smaller ones.

Given the general ignorance and confusions regarding social system and human nature constructs, little comprehensive planning work in these areas is likely in the near future. Smaller planning organizations are not equipped. Welfare and social work groups work mainly with program problems and lack planning background or training. Larger planning organizations are oriented towards physical environment. At most, functional planning may be strengthened or improved.

A major effort to develop component analyses and relationships among all four major constructs would need major centers, with federal, state and large metropolitan area pilot programs involving universities, consultants and professional groups. The use of social or other indicators for problem areas or functional interests is insufficient without a close tie to comprehensive planning needs. The following steps could develop comprehensive planning in the United States:

—National centers for knowledge acquisition and optimum system design, in such federal agencies such as HUD, HEW, a new environmental protection department or in the Executive office, others in universities, etc.

—Pilot programs to test the acquired knowledge and system design processes as a means of managing government programs.

—Involvement of major states and metropolitan areas in beginning stages of this process.

—Procedures for transmitting gains from knowledge acquisition and design testing processes, including technical assistance concentrating on knowledge development, its transmission and use; systems design help; publications summarizing progress; etc.

How Can New Knowledge Be Introduced into Planning?

The foregoing review of comprehensive planning in community design showed that a series of institutional events had been responsible for the growth and spread of knowledge. Similar processes would occur in a knowledge acquisition and system design program. Planning and professional schools would institute courses and their graduates would carry and practice the new knowledge and methodologies. Books and articles would advance these aspects and professional societies would incorporate them in publications, conferences, etc. Federal and State requirements for technical assistance programs and planning would include these materials.

Another path could be the vertical and horizontal coordination of federal, state and local planning. Without a coordinative framework, the smaller agencies' scarcities of skills and manpower would make it difficult to reach them and secure a working response to new knowledge. With coordination, providing for the rights of all partners, comprehensive planning in smaller agencies could be meshed with that in regional and state plan agencies, drawing on their greater resources and allow planning knowledge and technology to be implemented and expanded more quickly and smoothly.

Interim Policies for Comprehensive Planning

Lacking a great deal of knowledge and system designs for major areas, how can comprehensive planners actively assist government? To retire to the ivy tower and await the requisite materials would be unrealistic because their development depends upon involvement and upon assessment of real world events.

A preferable alternative would combine these measures:

—Making use of existing knowledge.

—Performing some roles not immediately dependent upon optimum system design.

—Testing some comprehensive construct components as indicators of program impacts and using these for policy formulations.

—Devoting resources systematically to system design, selecting portions thereof in significant but manageable bites.

To use existing knowledge means to continue neighborhood and community design planning, to design new towns, to use whatever we have learned about environmental pollution. These relatively local matters do not touch problems of major city, state or regional physical development. In the city and regional economic areas, it should be possible to relate development activity — via economic base studies and the like — to manpower and poverty planning. Progress on social system and human nature areas must await future development.

In six of the eight roles for comprehensive planning, informed guesswork can take the place of optimum system constructs, with recognition of major components. The knowledge alone that there are systems with major components gives the comprehensive planner a framework for action and decision-making. The six roles are:

—To assist political leaders in setting societal goals in terms of basic system needs.

—To help political leaders and budgetary officials allocate resources.

—To coordinate functional plans and programs so as to achieve societal goals in terms of basic system needs.

—To help indicate and develop dimensions for measuring basic systems and their components.

—To evaluate the consequences for basic systems of private actions and public program operations.

—To scan scientific and professional fields for information pertinent to basic system design and needs.

Two roles — designing the systems and estimating their future states of being — almost certainly require much more knowledge.

Testing the value of some components would be a key task for coordinating programs with comprehensive planning. Even without a plan, knowledge of a program's major concerns should allow one to choose indicators and devise measuring tools so as to evaluate program impacts. If the concerns are identified — numbers of jobs, or pollution effects, or relation of love and hate or freedom in the social system — one can have, find or invent tools to tell how programs affect those concerns. This activity need not await the design itself and can even provide important inputs to the design.

Finally, comprehensive planners must devote significant staff time to system design. Without this they have no grounds for their enterprise, they revert into functional planning and program operation, their other efforts have little effect and their ability to provide executives with basic knowledge and advice on societal improvement is weakened. This would include strong federal and state funding to acquire relevant knowledge and system design pilot programs, and to sponsor work by local governments, universities and consultants.

Societal Change and Comprehensive Planning: A Short Note

Sometimes the realization of new values requires great change, as when a poor nation tries to raise its living standards. Such cases seem to justify the popular but false image of comprehensive planning as equated with radical overturn.

Comprehensive planning can mean gradual and segmental changes that improve society within the limits of value and order which give a society its character. Methodologically, value and program decisions on segmental and gradual changes must be made with an understanding of the basic societal systems or constructs. This is comprehensive planning. Otherwise, the result is functional planning or no planning at all, and measures employed under these auspices may be far more disruptive and destructive as vital components of social existence are ignored and injured.

VII. THE SCIENTIFIC PERSPECTIVE

The interdependencies and interrelationships of management, planning and scientific endeavor have been indicated. Most federal, state and local funds for scientific research have been for specific problems and programs and have dealt sparingly with basic system problems. There are noteworthy exceptions: In the social area, federally financed work on racial discrimination has begun to yield policy orientations for education, welfare, etc., in such works as the Coleman report on education,

and reports on violence and housing.[5] In the economic area, the President's Council of Economic Advisors has built upon the national income economics of Keynes and his followers and, although challenged recently, this system construct remains one of the most influential tools for analyzing and developing government economic policy, and for evaluating entrepreneurial and consumer behavior.[6]

These noteworthy efforts indicate benefits of using scientific perspectives and information for policy making and program operations. Our problem now is to define and understand the substance of the scientific perspective and to indicate its role in government undertakings, especially in the five management approaches already cited.

After wading through many materials on scientific method, one realizes a scientist's perspective, his view of a life career, can be summarized in four simple questions, although these apply to infinitely complex and diverse phenomena.

—What is the phenomenon?
—Why does it occur?
—What will change it?
—Can it be changed in desired directions?

For example, concern about ethics and institutional structures of science in free and totalitarian societies is basically concerned with working conditions and attitudes that will allow such questions to be asked, and answered honestly. Work on statistical validations, systems and computer analyses, data processing, causality, inference and deduction, subjectivity and objectivity is concerned with the extent to which and the conditions under which answers to these questions can be shown to be true. Ideal types, models, frames of reference, basic concepts, structural systems all involve the ways in which phenomena are described and their relations visualized. Although each area has complex, subtle and significant things to be said, all these go back to one or more of these four questions.

These same four questions also may be the ones that every man tries to answer about various events in his lifetime. Then, why are these especially relevant to science? First, the basic concerns of science should not be completely separate from fundamental problems of human experience and nature. The fact that all people, scientists or not, share these concerns does not invalidate them, but points up the grounding of scientific endeavor in basic human qualities. The construct section on human nature encompassed aspects of these qualities in the concept of "enrichment."

Second, in an institutionalized sense the scientist's approach to these questions differs from the layman's. The scientist worries about developing answers to these questions, but typically for a limited range of phenomena and concerns. He is concerned with changing the parameters of being in this limited area through extending knowledge and understanding, while the layman achieves an understanding of his activities, and uses this as the parameter for limiting his activities. He may make new combinations of phenomena, as a successful entrepreneur often does, but he usually deals with them and with events by trying to maximize his position in relation to them. He may question the limits but tend to accept them, critically or not, and often routinizes his response patterns. Accordingly, he spends much more time in operations based upon acceptance of his answers.

Third, the scientist develops procedures for testing his answers and submits his work to the scrutiny of peers. In its various forms, the scientific method is at the heart of his professional ethos.

The layman need not develop procedures for review or test his answers, and may even ignore the fact that he has arrived at answers or that he has made assumptions which condition his answers.

What Is the Phenomenon?

The ability to describe accurately what one sees or studies is essential to scientific work. This depends partly upon the sophistication of measuring tools, be they mechanical or conceptual or both. The shift from Newton's to Einstein's view of the universe happened partly because certain motions and positions of the planets did not correspond to

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[5] Coleman, James S., et al, **Equality of Educational Opportunity.** U. S. Office of Education National Center for Educational Statistics, Washington, 1966.
[5] U. S. National Commission on Urban Problems, **Hearings, Volumes 1-5.** Washington, D.C.: U. S. Government Printing Office, 1968.
[6] U. S. Council of Economic Advisors, **Annual Report of the Council of Economic Advisors.** Washington, D.C.: U. S. Government Printing Office.

those predicted. The first attempt to explain this anomaly depended upon an existing predictive system — the Newtonian — and on instruments that would allow observations demonstrating degree of agreement with prediction.

Physical and biological sciences offer many examples of instruments developed to describe and observe phenomena: The electron microscope, x-ray, internal organ cameras, radioactive tracer elements, etc. and recently the instrumental techniques used in work on heredity and transmission of characteristics. The economic and social sciences have had data series, sampling and interview techniques, economic theories of the firm and national economic management accompanied by growth of national income accounting and other economic data systems.

However, a lack of adequate descriptions has severely handicapped many areas, especially in the social and psychological sciences relating to our concerns. Witness the disagreements on what narcotics addiction is, and, more complex phenomena, the nature of man or the fundamental characteristic of cities — both subjects buried under generalizations and platitudes which do not help in managing government. Thus we prescribe for symptoms without knowing the medicine will help. Whether the disease stems from racial prejudice or micro-organisms, the ability to deal with it depends on the ability to recognize phenomena. This requires the acuity of scientists and the ability to use what is seen.

Why Does It Occur?

Given valid descriptions of phenomena, the next problem is why they occur. Sometimes, such understanding changes the moral and intellectual climates of generations and societies, sometimes it adds only a bit of information in an esoteric field. Scientists are not content with description; their underlying drive is curiosity about the nature and causes of things.

This drive is not manipulative in the way that politicians deal with people and events or engineers with materials, but is explorative. Hence description is important as input, but finding the whys is strategic in the scientific perspective. In these attempts the role of experimentation, the testing of explanations, is crucial. All experiments are mental and only some follow the picture of a scientist in his laboratory, manipulating tools, chemicals, animals, injecting. Darwin, observing and thinking on his voyages, returned to England to conceptualize and organize his materials, used the earth as an observational laboratory for tracing evolution and why it occurred.[7] Einstein observed the universe and matter to develop a new frame of reference for space, time and matter and our position in relation to them.[8] Max Weber examined materials of history to find why capitalism arose initially in European civilization.[9] In each case mental experimentation was based on observation only, not on manipulating the materials.

The concept of "why" relates to the planning concepts designated earlier. In analyzing relationships which allow phenomena, the scientist deals with critical events and their environment — with what planners call "functional dominance." His models of system components are constructs, foci for data and impressions, similar to the constructs needed in comprehensive planning.

These observations on scientific method help us to understand his professional world and the ideal institutional environment for funding and congenial working conditions. And this shows too how the role of "statesmen of science" revolves around securing money and congenial conditions.

What Will Cause It to Change?

The scientist's interest in causes of change also stems from his basic curiosity. Explanation of why and how things are do not always sufficiently reveal characteristics. Identifying elements that have caused or can cause change are integral to explanations of why things exist, but further identification of such elements may reveal new potentialities for variation and insights on developmental features that may arise, from internal or external forces.

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7 Darwin, Charles, **Origin of Species and the Descent of Man.** Modern Library.
8 Einstein, Albert, **Relativity: The Special and General Theory,** Crown Press.
9 Weber, Max, **The Protestant Ethic and the Spirit of Capitalism,** Smith, Peter.

This approach may be the most significant for interrelating social system and human nature areas. Piaget and Erikson, for example, have increased the understanding of human development in regard, respectively, to learning and emotional staging of growth.[10] This understanding has elucidated some elements of retardation in early childhood. Work by Anna Freud and many others since World War II shows the difficult scientific efforts in developing this understanding, and also suggests how understanding of affecting components can lead to program recommendations.[11] These efforts depend upon working models — conceptual, mechanical, biological — serving as points of departure and at times as points of arrival. Only when the scientist has developed a sense of the situation and the component parts can he hypothesize, test the accuracy of his understanding, and determine the valid limits of this understanding.

Can It Be Changed in Desired Directions?

Public policy and moral values now enter the picture. Science may be ethically neutral, but its uses are not, and some may argue that the above question is not basic to scientist's concerns. Yet much scientific research does arise from someone's concern about a problem — the annals of medicine and the child development literature have many examples of combined moral and scientific motives for changing phenomena in desired directions. Often government policy and programs provide parameters of direction and range which can help to indicate desirability of change.

Relation of Scientific and Management Perspectives

The scientific perspective is a foundation for evaluating government programs. The testing of action by criteria of logic and truthfulness often yields uncomfortable results for bureaucrats — including planners — and politicians, but the alternatives, public or private opinion and pragmatic knowledge, may be faulty and partial. Despite the problems in physical and biological science areas — witness the controversies about pesticides and food additives — scientific methods are accepted and money is appropriated for their application. In social system and human nature areas, funds are appropriated mainly for program operations, and tend to be huge — in welfare, mental hygiene, corrections, etc. — while scientific approaches to these phenomena are scattered, uncoordinated, underfinanced.

Another problem is that an evaluative stance on the social system and on human nature arouses strong resistance. To reveal society's workings can challenge the values of some groups, affect the interests of others, or raise professional disagreements about the directions of inquiry and the validity of findings. Utilizing science to improve government is difficult at best; but without such use, the basic foundation for advance is lost.

Science and the Budgeting Perspective

Science centers around the what and why of phenomena; budgeting does not have these at its core. To repeat, budgeting at one level involves political grounds for allocating resources, at another control over expenditures for agreed upon purposes, and at a third efficiency and effectiveness yields.

But budgeting is related to scientific endeavor through approval of expenditures for undertaking scientific work. The budget-maker must be convinced that specific scientific projects are valuable. Since scientific research is often risky, its prospects and values should be well documented. Because risks are greater in social and psychological areas reluctance to support them can be understood, if not approved.

Overall, the budget's relation to science is episodic, depending on political needs, the personal relations of program administrators and scientists to budget-makers, and the competence and knowledge of all involved, about needs and possibilities. If more systematic grounds for decision-making are to be developed, approaches like those recommended for functional and comprehensive planning might provide the framework.

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Science and the Program Operations Perspective

In operating programs outside the physical and biological fields, the government scientist is often in the same position as the planner. His ability to contribute to solving operating problems is generally limited, his knowledge is suspect and the pertinence of research to operational problems may be questioned by administrators who do not respect social and psychological science. He must compete for limited funds when needs almost always exceed resources, and his basic enterprise is risky because research may not yield useful answers. Moreover, it often requires considerable effort to secure data needed for research.

Thus, program operators are not questioned too closely about results which appear acceptable, but added investment in scientific research is resisted in favor of program expansions or administrative reorganization. The provision of institutional organizations for scientific research and for acquiring valued knowledge is neglected or is hit-or-miss.

A great deal depends upon the widely varying personality, breadth and professional competencies of program administrators, many of whom are appointed for political rather than professional accomplishments. Government does acquire a great deal of knowledge from outside, through universities, professional associations and private enterprises, but there are problems in transmitting this knowledge and in adapting it to government programs. Thus, while there may be scientific activity in specific fields, the pertinence and feasibility of results may be problematic, with institutional competence and personality factors limiting use.

Science and Distributive Planning

Of the three planning perspectives, distributive planning has the least relation to science — and, since a great deal of planning is distributive this may explain the lack of close ties between general planning and scientific effort. Nevertheless, there are some implicit, although unacknowledged, dependencies on scientific effort.

One is in defining phenomena and collecting data. The United States Census and other governmental definition and collection of social, economic and physical data on the state of the nation and its components are major investments in a scientific study of societal problems. Despite some inadequacies in collection procedures and types of data, without this mass of materials many distributive planning efforts would collapse or be much more difficult. Special surveys taken to secure similar information in intercensal periods or added data that can be related to Census characteristics are often supplemented by materials secured from commercial polling organizations.

Scientific effort is also related to projection of data, in choosing projection techniques and assumptions. Most significant, however, is the understanding of situational contexts and elements regarded as responsible for present situations and inferred to be most probable in the future. Such analyses rest upon scientific work concerning the present as influenced by the past, but the correctness or reasonableness of future prediction must be proved by events. Many planning predictions about distribution of phenomena are unfortunately done without examining reasonableness, yet the predictive process does bear some relation to data analyses.

These relations of planning to scientific effort are minimal. Generally there are no procedures for testing the reasonability or correctness of predicted distributions. It is a rare study that tests its own work and supplies information thereto; perhaps as rare is a follow-up in 10 or 20 years to see how good or bad predictions were and why. This predictive work, lacking the support provided by a strategy for achievement, has little relevance to reality. And such predictive work is generally consistent only with itself, not related to other conditioning phenomena which would be given in developmental constructs of the type presented in the comprehensive planning portions of this paper.

Science and Functional Planning Perspectives

Two of the six roles listed for functional planning, goal formulation and coordination with comprehensive planning, do not directly require scientific information. Scientific information however, has a varied and significant role with regard to reading the future. Knowledge of scientific trends, and their technological impact often indicates future societal consequences. Inspection of scientific ad-

vances are a part of knowledge acquisition activities. That part of coordination dealing with program duplications and gaps does not require scientific input. However, impact analysis as a grounds for coordinating directional efforts of programs, depends upon scientific measurement of outputs and consequences of program operations. The functional dominance approach, resting on the production of critical events to reach objectives and the creation of a "climate" to foster the occurrence of these events, depends on the development of scientific information.

In the past, the significance of this relationship between science and planning has not been thought through clearly. The scientist is not reached easily and planners, because of their interest in program operations, relate more closely to bureaucrats and program operators. If the scientist is not in government, he may be blind to many scientific needs of government programs. If he is in government, he will soon relate to his own program operation and its decision makers, and to those who control the purse strings. Thus, there is a lack of communication with planners. This is not surprising, for science is the older and established tradition while planning is relatively a new art. Thus both sides, because of immediate pragmatic interests, have not seen the need for each other. The lack of adequate theoretic development in planning also has been an obstacle to closer cooperation.

Science and Comprehensive Planning Perspectives

Three comprehensive planning roles do not involve direct inputs from the scientific perspective. Goal setting is essentially political while scientific data enter mainly as constraints on decisions and resource allocation is a matter of political decision making. While the quantitative data on available resources might have been scientifically determined, its distribution will be guided by political considerations. Coordination of functional plans and programs to comprehensive planning involves administrative rather than scientific analysis.

Optimum system design depends heavily on scientific inputs. Exploration of human nature components and their relationships and needs is the fundamental ground for the development and evaluation for all constructs. Without this, attempts to justify everything else may be hopeless in any logical sense of ultimate value relevance. Thus reliance on growth and use of scientific knowledge is vital. In the absence of such knowledge we rely on pragmatic knowledge and the observations of informed professionals to justify programs. Often the judgments are correct. Yet these efforts are based on implicit assumptions, which are still unclear about human nature. At times these efforts are incorrect, insufficient or partial, and as a result programs fail. This will always occur. Here, the request is that we develop a more explicit, rounded and knowledgeable ground for using our skills and information in a more thorough way. Ecologically, this need has been made clear as we put together an appalling picture of the ways in which the physical environment is being polluted. Much of the public outcry against pollution can be attributed to the scientific effort to explain the phenomena. This does not deny the "efficacious" aspects of a few major oil spills which have aroused the public and spotlighted the need to control and eliminate pollution. As a result of these gains in scientific knowledge and its application, we now realize that optimum system design for the physical environment rests upon the ability to utilize scientific inputs relevant to the construct area.

For reading the future, scientific and related technological developments will have a significant effect on construct and component existence. The knowledge acquisition role must include information on scientific advance and functional planning must assume the task of developing appropriate scientific tools required for impact measurement.

Conclusion on Scientific Perspective

Even when the scientist is deeply involved with government, his self-concept is one of being apart and independent of such involvement. This attitudinal independence exists apart from personality considerations which may lead particular kinds of people to choose scientific careers. Scientists have secured reputability of their calling only by fierce struggles to maintain integrity and independence in the search for truth. In addition, their work is open to continuous and rigorous scrutiny by peers. Science demands sufficient ego strength by the individual to defend his independence, reputation

and competence. Thus, if the wedding of scientists and policy making personnel in government, whether they be planners or others is to be successful, both sides will have to preserve a delicate balance of perseverance, toughness and breadth of vision.

Yet, the scientist's task, difficult as it may be, is simpler compared to the planner's. Dealing in one area of concentration, the scientist typically treats with unknowns in only that area. If he is a physical or biological specialist, he stands a good chance of being funded by a Federal or other government agency, a private foundation or a university. The planner, on the other hand, deals with a multiplicity of variables, uncertainties and unknowns even though he, too, may be supported by governmental or private agencies.

Finally, a few words should be said on strategy for financing scientific research in government. Great effort has been made in physical and medical sciences; space research, heart and cancer explorations, for example, have received substantial funding. These efforts derive from conscious government policies and choices. Top flight scientists in these fields, familiar with the state of the art, identify crucial needs, and the steps most likely to succeed. In these physical and biological science fields there may well be a relative state of order and sense of underlying strategy to the financing of research.

In spite of government and private involvement in social system and psychological science areas — the National Institute of Mental Health and the Urban Coalition efforts are examples — a sense of strategy framework is missing. Federal and state grant systems and agency effort in these areas have little to do with appraisals of overall need. Some of the private efforts are too new, and diverse in scope or too small to gain a strategy sense. Perhaps, the Ford Foundation's effort in these areas might prove an exception. Some kind of strategy framework is needed if the usefulness of scientific research into the problems of managing government is to bear fruition.

VIII. REORIENTATIONS

In this part of the paper, various ways of making use of the insights gained through the examination of management functions are suggested. This discussion of roles and responsibilities inherent in the six perspectives has major implications for training, orientation and function of government staffs in budgeting, planning and administrative lines and for professionals with functional expertise as in health, welfare, etc. These implications apply to university careers and on-the-job training too. These considerations are presented in three sections: one dealing with using combinations of perspectives; a second with staff training and education; a third with job training and function.

The Need for Combinations of Perspectives

This review of perspectives on managing government has demonstrated ways in which they interact and how each has a core approach unique to its own function and position. How can this knowledge of relation and uniqueness be used for improved management?

One benefit arises from presentation of an overall management system in which each group sees its own position and responsibilities and those of others; thus each knows what is expected of it and what may be expected from the others. Possession of this overall perspective clarifies roles and responsibilities and helps to prevent confusion and disagreement. In addition, this overall view allows consideration of a full range of tools for use in problem solving. Knowledge of the broad range of a program introduces flexibility in approaches especially when responsibility is shared by a number of people or units and a team approach is needed. A fourth benefit is gained as analytical aspects are seen as more relevant to particular agency response which can vary more readily with purpose and assessment of capability. Thus a particular problem may require response through only one perspective while another may require a combination of budgeting, program management and functional planning, etc.

This management approach should be compared to recent attempts to install complete review and analysis through the planning-programming-budgeting approach, within a relatively short period of time. These efforts ran into difficulties as adequate groundwork for understanding, staffing techniques and acceptability had not been provided. A recent publication noted that there were major problems in relating line operations to comprehensive plan-

ning techniques, which have not been resolved.[12] Another report stated "the task of introducing rationality into most government agencies is too complex, both in terms of devising an ideal program structure and of implementation to be accomplished all at once in the abstract. We must begin with what the agency is actually doing and move forward from there."[13]

Comments in this paper also pointed to insufficient knowledge about the agencies; failure to develop adequate measures of effectiveness; hostility of agency heads and personnel; unclear definitions of staff responsibilities and discretion accompanied by inadequate control over subordinates; inadequate punishment and reward systems; and ability to manipulate formal response systems so as to evade supplying desired information. These items point to the need for considered approaches to improvements in managing government.

One approach might analyze one agency's functioning through use of all perspectives. In view of deficiencies in functional and comprehensive planning knowledge, this might prove a difficult undertaking. A narrower approach concentrating on specific programs might better serve the purpose and as the basis for a pilot project. Then, problems of organization, data collection and utilization in relation to each perspective might be handled in a more manageable way. With a few experiences of this kind, it would be pertinent to consider next steps in installation of better management systems on a larger scale. The decision might be one of several: continue with pilot programs; concentrate improvements in one or a small number of functional areas; concentrate improvements in one of the perspective areas; or use combinations of them.

A pilot project should be undertaken with multidisciplinary teams in order to better understand mutual needs, problems and strengths, so that each can envision the full range of requirements for good management, and appreciate the depth of problems encountered along with the contributions towards solution that can be made by each member. Team approaches of this kind offer a foundation for building interdisciplinary cooperation and for changing knowledge and attitudes about good management requirements.

Suggested Agenda for Pilot Project Management Review

A pilot project might incorporate the following elements:

I. Brief statement of Purpose
II. Program Organization
   A. What is the program about?
   B. What are the results desired?
   C. How are results achieved?
   D. What are the major decisions involved?
   E. Who makes them?
III. Program Evaluation
   A. Who does it?
   B. Where is the function located in the organization?
   C. To which components is evaluation applied?
   D. What are the methods used?
   E. What criteria are used?
   F. How often is evaluation done?
   G. How is evaluation used?
   H. What are the results of using evaluation?
IV. Planning
   A. Who does it?
   B. Where is the function located in the organization?
   C. To which components is planning applied?
   D. What are the methods used?
   E. How often is planning done?
   F. How is the planning work used for the program?
   G. What are the results of using the planning?
V. Scientific Information
   A. Does anyone in the program do scientific research?
   B. Does anyone assemble scientific information for use in the program?
   C. Where in the organization are these done?

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12 Rosenberg, Fred, **PPB or Not to Be.** Albany, New York. New York State Office of Planning Coordination, 1969.
13 Fasteau, Brenda Feigen, **The Planning-Programming-Budgeting System in New York City.** Unpublished paper prepared for the Eastern Regional Conference on Science and Technology for Public Programs, Boston, Massachusetts: April, 1970.

D. What scientific methods are used?
E. How often are the results of scientific work fed into the program?
F. How are these results used?
G. What consequences have emerged from the use of scientific work?

VI. Review of Perspectives Applied to Pilot Project
A. General Framework and Purposes
1. Budgeting
2. Program management
3. Distributive planning
4. Functional planning
5. Comprehensive planning
6. Scientific

VII. Discussion on Applying Perspectives

Educational Implications

The public administration view of management will have to make more room for planning and scientific inputs. Teaching of administrative strategies should be designed in terms of likely situations with indications of possible response patterns if it is to be successful. The view of budgeting in regard to evaluation and management also would be altered.

Changes in planning curricula would be a major result. Most planning curricula are design oriented, with a smattering of information courses in law, urban sociology, housing, etc., and a technique course or two. No distinctions are made between functional and comprehensive planning techniques, and comprehensive substance is limited to community land-use design. Scientific relationships are ignored. The planning perspectives in this paper challenge these curricula by presenting distributive, functional and comprehensive differences in technique; by pointing to significance of basic constructs; by noting necessity of construct application and use in economic, social system and human nature areas; by bringing scientific endeavor to bear on the practice of planning. Thus, the horizons of planning training would widen to correspond with the tasks of management which government faces.

Various responses to this challenge could occur. While some planning schools may stick to their guns, others could include added perspectives in their curricula and offer specialization. New schools could be started, offering training in planning from the social system or human nature perspectives. Thus, instead of the field being narrow and relatively unaware of its technical foundations, these would indeed be the ground base for planning instruction. Through such increase in understanding, an increase in competence would occur and with it a more mature view of the relationship of planning to society and government.

Job Training and Function

Problems of job training and function can be seen in four ways. One concerns entry level training. A second deals with orientation in a continuing career. The third concerns the relations between possession of a professional ethos and individual expertise and co-optation by agencies. The fourth involves the rivalries of professionals from different fields.

At Federal, State and municipal levels, larger units of government have training programs by which new and beginning entry personnel are introduced to government service. Typically this program may last a year and persons in it are rotated among agencies for exposure to types of jobs, skills and careers. These interns often are required to write reports on experiences and to attend seminars dealing with certain aspects of government. On completion of the basics, the interns are promoted and assigned to a specific agency.

This approach can be improved. First, training is only as good as the people who give it. Under present circumstances, abilities of training personnel often are limited. They are committed to agency perspectives and thus one-sided in appraisal; or else they come out of a public administration background with insufficient training on scientific approaches, planning and evaluation techniques.

Further, the limitation of training to the lowest professional level, omits a large group of lower level entrants in other fields who could benefit similarly. Above the intern level, almost all governments take new lower level professionals and slot them into a specific job in a specific agency, thus assuming relevant ability to handle the job and that requirements for good performance are to be found within perspectives of the agency. This

last is an incorrect assumption, and we would accordingly recommend three steps to avoid this situation:

1. that the training system contents and perspectives of trainers be reevaluated in terms of the perspectives advanced in this paper;
2. that intern training techniques be given to new lower level professional entrants in all agencies;
3. that initial year rotation of low level professional entrants among relevant agencies be considered.

There is need also for stimulating and refreshing incentives and outlooks of professional personnel who may have been locked into one position and set of attitudes for too long, and have not had the opportunity to take another look at themselves and their jobs. Even though these people participate in professional conferences and publications, these are peripheral to job experience and requirements. Large scale organizations require routine procedures to move case materials along, and to see that personnel work diligently to establish and maintain these routines. Because innovation and reevaluation threaten these relationships, they make work more difficult as new procedures are required, cause uncertainty about process and product, and offer threats to people who cannot absorb change easily. Thus there are strong commitments to the established order, and the problem of introducing scientific and planning perspectives, with their implied commitments to change, requires managerial ingenuity to keep these perspectives fresh; to judge rates at which innovation should be introduced; and to secure staff acceptance and cooperation.

These problems are complicated by career considerations. The professional should possess an ethos derived from statements of purpose, direction, technique and regulation in his field. Pragmatically, he is paid by a particular agency and government; future advance is dependent on recommendations made by his superiors; satisfactions in job assignments are directly involved; further satisfactions are dependent upon relations with co-workers; and in order to do his job, he must identify in some way with goals and purposes of agency and government.

Thus, without innovative leadership or strong evaluative position in an agency, the professional must bow to routine in work operation or face the prospect of securing a reputation for being a "maverick", "getting out of line", being "pushy", etc. Often this applies to new and young staff and the training process includes "socializing" these "deviant" tendencies. Often, excepting "personality" cases, the end result is conformance to routine with losses of innovative drive. Under these circumstances, "loyalty" to the agency is much stronger than the sense of professional development.

This situation is complicated by professional attitudes. Budget personnel are conscious of power to determine funding, staff and operational levels of agencies. Budget personnel deal within a definite world of relatively fixed and known resources in which decisions must be reached, and programs and agencies are reviewed as to how well they have performed. Normally these expectations do not include a planning or scientific outlook. Budgeting carries hallmarks of power, specificity, decisiveness and evaluation. These help explain the ethos exercised by such personnel. Yet, this power can be exercised only within the councils of government, and very often has nothing to do with what is happening in the rest of the world. Much more difficult to handle are the problems faced by the other professions where the tasks are often more demanding and uncertain. Budgeters sense these uncertainties as basic attitudes of professionals in other fields, and tend to be critical. However, while budgeting is more certain in its operations, its limitations as a managerial tool should be recognized, and due allowance should be given to other types of professionals trying to wrestle with the outside world.

Aside from the top men, who may be political appointees, program managers are drawn usually from professionals in relevant fields and public administrators. Their work is marked by matrices of administrative structure and regulation, and governed through specific techniques and personnel factors with applications of cost accounting. These managers are close to budgeters, for in the organization of work and allocation of resources they share a working climate which requires de-

cisiveness and specificity. This climate is reinforced by housekeeping agencies which have to be effective within government only in terms of providing services. These include civil service and personnel agencies, public works, construction and general service groups. Like budget, these agencies can be decisive in work processes, and their view of others is likely to be similar.

When emphasis shifts to effectiveness in the outside world, uncertainty enters. Rapid shifts in societal settings put strong pressures on program administrators, introducing new requirements and testing flexibility and capacity to respond adequately. Bureaucratc impulses towards routinization are upset and often conflict with pressures induced by change. Therefore, while managers live partly in a definite world of immediate decisions, they exist also in an uneasy world of evershifting situations. Professionally this leads to a personality split. One side effect may be resentment and distrust of those whose expertise depends upon ability to detect and deal with societal changes — e.g., planners and scientists. To the extent that these professionals do not help the program managers, distrust is deepened.

These circumstances weaken professional elements. Co-optative processes for security and accommodation are strong in the face of uncertainty. The uncertainties become attempts to keep up through exercise of better management techniques. Often, one casualty in this upkeep effort is a decline of attention to scientific advances and innovations. When attempts are made to "keep up" with job and profession, the strain can be extensive.

If program administrators can be regarded as subject to split personality problems, planners should be regarded as classic multiple personality cases. Various types of planners have been indicated: those who would be development entrepreneurs with public money; architect-designer types; out-of-place social scientists; skeptical and disappointed utopians; misplaced and frustrated program managers and decision-makers; theoreticians; pragmatic administrative realists; confused students and beginners; would-be scientists; prophets; special-interest advocates, and so on. Perhaps, a planner is in essence a combination of all of these; for actually the career of many will at one time or another encompass a number of these roles. To many, this proliferation of types must seem confusing, with resultant unease about the field and what it can do. Moreover, the lack of technical foci in the field, and arguments about them, contribute to this result.

Planners, sensitive to the reaction of others, respond in various ways. Where they are closest to command techniques of budgeters and program managers, they often join forces with them and look down on other planners. Architect-designer and pragmatic administrator types do this at times. Those with social science skills, in striving to get a "piece of the action" may respond by moving over to entrepreneurial or administrative roles, or turning to retreatist and skeptical attitudes. In either case, they move away from planning and its techniques although they may continue to be employed in planning agencies. As these changes occur the planner's attitude toward others becomes more manipulative, and critical. If the planner cannot secure professional satisfaction on his own grounds and he does not give up, he is forced to seek satisfaction on the other fellows' turf and this involves conflict possibilities. Thus greater demands are placed on the development of his relational skills.

Some fault for this state of affairs must be attributed to planners, for they have not elucidated the basic disciplines of their own field. The result has been internal confusion, and weakness, sensed and used by others to dismiss planning as a nice idea but something that cannot be done in this country. Yet many intelligent planners, devoted to the field, while not fully comprehending its nature, press forward, doing what they can for the solution of societal ills.

Like budgeters and program managers, scientists have characteristics of specificity and directness in their work. While unsure of outcomes, they are certain of the values of scientific work and its acceptability. However, there are important departures. Output orientation is very significant with widely held and rigorous procedures for testing validity. Tests made by like professionals, and exchanges on work validity and value through professional media are currency by which the scientist is judged, and a key to his future. Thus, professional-

ization may be as strong as agency co-optation pressures in contests for loyalty and commitment. Accordingly, in relation to government the scientist always has available a perspective that allows him to exist apart from the heavier commitments characteristic of other professionals.

Theoretically, planners and scientists should share contextual approaches to problem and system analyses, and attempt to communicate. In reality the confusions of planners obscure the grounds for such relation and often leave scientists polite, sometimes distantly alert and not very interested. Scientists tend to see themselves as upholders of a professional ethic concerned with the way in which phenomena are investigated. While they may share common ground with others, they are more careful of their independence and professional reputation.

These considerations point to needs for the solution of two problems: (1) breaking down the narrowness and isolation of outlook imposed by agency plus professional differences; (2) reinforcing adherence to professional responsibility in the face of agency pressures for conformity. Some approaches to these problems are suggested below:

First, the usefulness of interdisciplinary, interagency approaches to break down such barriers has been presented earlier. Second, efforts at refresher training should be more regular, frequent and institutional, whether they involve sending staff to experts or vice versa. While such refresher efforts are made in some areas, they seem to deal more with processes than with problems of substance and are thus weakened. A continuous program of refresher training input should be provided so that important components of the staff are always involved. Sabbaticals for deserving personnel also could be considered. This could result in quickening the work climate.

Third, is the problem of new, top agency executives. Often these men are political appointees with little direct experience for their positions. They may have considerable experience in other areas and have displayed a great deal of ability and drive. The day such men step into office, however, they risk becoming captives of an entrenched bureaucracy which will feed them with its own version of events. Many persons taking such positions recognize the danger, and among the counteracting steps sometimes install their own "team" in key positions. This step may help but does not compensate for the lack of perspective. It is suggested that either prior to or at the beginning of office terms, new top executives take intensive two or three months training courses, full-time, dealing with the fields of agencies they will administer.

While this suggestion may seem demanding, it is quixotic to expect a professionally ignorant man, bright and able as he may be, to administer a large segment of the complicated machinery of government without making sometimes disastrous errors. The mechanics of establishing such executive training centers needs exploration. Perhaps establishing national and/or regional training centers and programs in conjunction with major professional organizations in each field, could be handled best by the Federal government.

The fourth suggestion goes to the heart of the conflict between professionalization and co-optation by agencies. We would take specific disciplines like planning, budgeting, public administration and have their career employees trained in a central government service which would make these staff available to other agencies on an assignment basis. Thus, we would have central services for planning, budgeting and public administration. Assignment would be made on the basis of agency need and evaluation of ways in which such staff were used. If planning staff for functional activities were requested and no planning was done, it would be possible to reassign staff. If an agency requested budget staff to develop efficiency techniques and measures, and did not do so, by virtue of its funding powers, a central budget service could negotiate the matter and take appropriate action.

This approach would make professionals responsive to an ethic of government improvement and free them from commitments to single agency points of view. It would remove the responsibility for negotiating adherence to professional performance from the individual and place it in an institutional context in which the bargainers would be more equal. It would identify career interests of the individual with his profession and his evaluation by his peers, instead of committing him to single agency dogma. It would open up the whole

range of government for promotion and experience instead of locking professionals into a bureaucratic pigeonhole, and bring more honest information about agency performance to the management arm of government. It would make a richer perspective on procedures, organization and substance available to agencies as each central service would require its professionals to exchange ideas and information.

There are some disadvantages to this proposal. First, if professionals are assigned from central services, top agency executives may not be inclined to trust them. It would take skillful diplomacy and demonstration of helpfulness to overcome this distrust. Second, every agency has professionals who will feel threatened in terms of promotional opportunities and exercise of policy influence by these "outsiders." Yet this conflict already exists and may not be any different under the new system. In fact, the situation might improve. Since the planner, budgeter or public administrator has promotional opportunities available in the whole range of government, he might be less inclined to pressure for promotion in the agency to which he is assigned.

A third disadvantage is that the proposed reorganization of professional services would upset the existing system. While this is true, the upset might be minimized in a variety of ways. Introduction could be gradual, in one functional area at a time. A functional planning body, might have its own planning staff and, in addition, hire and assign planners to agencies with which it is most involved in social services, community affairs, etc.

In this program, central executive services would not be discontinued. The chief executive's budget office would continue with central budget preparation in addition to running a budget service for agencies. There would still be a central planning office responsible to the chief executive, working on overall policy directions, comprehensive planning and other tasks as necessary, in addition to providing planning services to the agencies.

Finally, professional staff in these services should be rotated periodically and not allowed to stay in any one area overly long; otherwise "hardening of the arteries" sets in and identifications and commitments in one area may distort professional judgment. Periodic reviews of staff assignments should be made by central staff executives. Staff could be moved on the basis of capabilities, desires and interests, and to provide growth of capabilities. Reassignment and rotation to balance the new and the old in an agency or function would be beneficial both to the individuals involved and to government as a whole.

IX. OBSTACLES AND POLITICS

This paper has been concerned with analysis of some tools for managing government, with major emphasis on planning. These include:

1. The inability of professionals in each area to see and understand each other's roles and relations.
2. The confusions in regard to understanding the essence and limits of one's own work — particularly in planning due to relative newness and complexity of the field.
3. The sometimes unhealthy attitudes of professional towards each other, often arising out of competitiveness.
4. The loss of professional perspective and behavior involved in co-optation by agencies.
5. Agency resistance to incorporating and institutionalizing continuous innovative perspectives, especially with regard to output evaluation.
6. The relative unpreparedness of many politically-inspired appointees who are given command of agencies.

We have tried to deal with each problem by noting the confusions, rivalries and fears, clarifying reasons for them, and then presenting a framework in which the roles, responsibilities and relations are defined for policymaking and evaluation. Suggestions have been made concerning measures that deal with some of these problems. Major attention has been given to planning because it is a managerial tool with great potential. One major problem has not been discussed, that of the relation of managerial tools, especially planning, to the politics of governing.

The political perspective is sharply affected by the time frame in which the politician works. The politician is elected for a determinate period and

as major problems arise he must show results within his span of office or face the possibility of losing elections. Thus the politician puts pressures on managers to develop programs directed towards producing results. However, one must distinguish between program as input and results as output for the two do not necessarily follow from each other. This is especially true when dealing with social and economic problems. Hence, the well-known tendencies for politicians to favor capital facilities construction — roads, housing, schools, parks, hospitals, etc. These highly visible and tangible products are the sine qua non of successful action for most people.

The politician's knowledge of capabilities of the management tools influences his attitude towards them and to the agencies which use them. In this domain the budget office is in a very favorable position. Through continuous and close dealing with agencies, budget officers obtain knowledge of programs that are ready to expand or go ahead and of the output premises and promises. Often these are programs delayed or held back by monetary shortages. When, however, politicians face pressures in a particular area and must produce results quickly, they often turn to the budget office, and a packet of programs soon emerges. The speed of response may bring acknowledgement of the politician's sensitivity to emerging issues and public demand. There is a difficulty since these programs may represent nothing essentially new in dealing with factors responsible for the problem. When underlying conditions have changed and innovation is needed, the success of the package depends on the sensitivities and qualities of personnel preparing it.

The program manager often is in the same position as the budget officer, but within the narrower range of his responsibility rather than in terms of an overall view of activities. He knows which programs can be made ready for immediate use and has some idea of what they will yield. When the politician asks for assistance, the program manager may accommodate him on the input end but the output or program consequences are subject to the caveats given above in discussion of budget.

The relation of scientists to politicians is another matter. It is difficult to set the time span of a scientist's work within the frame of political needs. Science can be intensive and methodic but success in the pursuit of knowledge is elusive. Yet the reputation of science for producing over the long run is such that its practitioners are treated with respect. Politicians are thankful, as demonstrated by awards and ceremonies, when scientists produce useful results. However, in two situations these attitudes do not apply. First, in areas of social and psychological sciences, the difficulties and uncertainties are so great and so well known that the same degrees of respect and acceptance do not apply. Instead, more attention is given to program managers who are regarded as producers in these areas.

Second, when the scientist is employed by government, there is a tendency for his efforts to be subordinated to immediate program demands. As the needs of the political situation are predicated upon such immediacy, his commitments must be extended to program managers. As budget officers sense this immediacy need, they will join the push for it. Thus scientific endeavor in government often will receive short shrift and little money.

Unlike scientists, most planners work for governments or as consultants to them. In terms of taking account of their own time frame, politicians have the most difficulty with planning as a managerial tool. There are good reasons for this. Many do not require much of planning agencies until an election is faced, when demands for product are made. If the agency has not been active, these demands are difficult to meet because planning takes time. Consequently, instead of plans, response may be in the form of numbers embodied in a report, guidelines, and a few capital project proposals. This response format is most similar to that embodied in distributive planning. While this model may serve the politician's needs and thus account for the survival of distributive planning, its shortcomings as a managerial tool are serious, as noted earlier.

A second part of the problem is confusion as to the nature of planning. If functional planners have not been doing planning in terms of establishing their critical events and environments necessary to secure these events with the programs to accomplish these, they do not have plans. At

most they will have goals, forecasts, preferred policy directions — the distributive emphasis again. If comprehensive planners have not identified basic constructs with the most significant components and their relations, and have not done optimum system design with coordination of functional plans and programs to achieve this optimum, they do not have plans, and will not be able to do adequate program evaluation. At most they can assist in goal setting, in overall resource allocation and do some prediction providing numbers to go along. Naturally the lack of perception and agreement about basic technology severely handicaps overall planning performance. This confusion does not help the politician. Further, since planning is difficult and complex and takes time to get going before results can be expected, these delays add to the inability to serve the political executive in his hours of need.

Two more factors should be added. To get planning projects started, a great deal of overselling can be done. The planning profession has been somewhat guilty of this, and the inevitable failures to live up to expectations have had boomerang effects. Finally the efforts of planners to join other executive agencies, such as budget, in making evaluations of agency programs have been resisted by line agencies for many of the above reasons. As political officials have been able to secure inputs from line agencies but have difficulty in getting plans from planners, they tend to side with the former. For these reasons, the planner-politician relationship often has not been happy.

In assessing the relationship to politicians under these conditions, some important points about the planner's skills should be kept in mind. With his long-range view, an overall knowledge of programs, attention focused on events in the world outside of government, and training in relational and coordinate aspects of system design, the planner and his agency bring a unique combination of talents to the service of the political executive. Consequently, even when no plans are made, planners with ability will bring a unique balancing element to the councils of executive politics. To date it is this combination plus the political utility of distributive goal statements that has enabled planners to get by without producing real plans.

These political requirements and planning difficulties have yielded a pattern of relationship and response familiar to those in the field. Planners help in the provision of goals and policies oriented to the future; advise on allocations of resources; and with a partly developed skill in the area of physical environment, move into land development, design and control programs. When special information or studies are needed, planning staffs may be used to develop them. Further, when functional bodies are not performing adequately either in terms of planning or current resource allocations, planners may move into this area and provide needed input. In these ways planners can be helpful, even if they do not plan. Yet if politicians and public are led to expect plans and they are not forthcoming, difficulties may ensue.

We see that often the executive politician senses conflict and frustration with the planners. As his time frame and needs differ and his evaluations grow out of different knowledge bases, he may be in conflict with the planner's professional desire for a more rounded approach to problem analysis and solution. Indeed, he may feel that at times, the planner is trying to tell him what to do and move in on his decision making power. It is true that at times the politician's knowledge base and reality perceptions are superior to those of the planners.

In this framework, comprehensive planning may be regarded as being more attuned to a picture of societal needs, while functional and distributive approaches are closer to the needs of political operations in terms of goal structures and time frames. If, in addition, the conclusions about the nature and roles of comprehensive planning are included in the picture, we can see that the price for backing such an approach must seem high to politicians, and the payoff regarded as dubious. If the politician is asked to back a comprehensive planning effort, although the actual making of the plan can fall within his time frame, the payoffs, in terms of starting projects and realizing benefits often do not fit. Thus he may be more inclined to step down to the functional area where he can get a more operational view of specific program problems and feedback from the program manager. Thus functional planning, with all its difficulties in technical performance will be regarded as closer

than comprehensive to meeting political needs. In these circumstances the attempts of planning chiefs to be relevant to the political scene may either distort their operations, by going to distributive analysis as noted earlier, or by moving in the direction of functional program approaches, thus opening an arena of conflict with program managers.

These difficulties arise from confusions about the technical nature and methods of planning. As long as planning efforts consist of an unorganized melange of distributive, functional, comprehensive and policy elements, the problem with regard to political goals and time frame may be regarded as two fold: one dealing with clarification of the technical confusions which we have attempted in this paper; and the second dealing with getting started. If there was an ongoing comprehensive planning process, undistorted by confusions with other elements and immediate political demands, and handled by capable people — always a problematic matter — in time a continuous stream of policy and program formulations would be forthcoming and so would the payoffs and evaluations arising from program operations. However, if the planners cannot create a favorable environment because of their own confusions about the field, then comprehensive planning never will be done, or if it is tried it will be discredited.

These strictures apply to the arena of legislative politics as well and the confusions about planning add fuel to the fire. In an interesting article on Congressional information and politics, Schneier has noted that Congress is structured to maximize what he calls "functional rationality" — a rationality which emphasizes coordination of action with reference to a definite goal.[14] On the other hand, reformers of information systems emphasize system analyses bearing upon the relatedness of events. Schneier sees conflict in these approaches as the Congressional system — and this may apply to legislatures in general in the United States — is based upon a fragmentation of political structures territorially and in terms of substantive areas, each of which is a policy sub-system. The legislative role in relation to the clientele and claimants in each of these subsystems is distributive and the powers and prerogatives of office here are related to the degrees of control and influence exerted by the legislators among these subsystems. Schneier notes that the system can work well if key groups are represented in the legislature, for this provides a bargaining basis which avoids confrontation politics and demands for basic system change by processes of negotiation and adjustments of distribution.

This system poses problems for planning. While the capable planner may put political elements into his comprehensive social system analysis and work through problems of functional program feasibility, his perspectives and those of the legislative politician still will not be in agreement. There is still a time frame problem. There is a competitive problem for the planner's work best serves the executive politician who as the representative of all the people, most needs overall system analyses. Further, the advice provided through such system analysis is a threat to the bargaining services of the legislative politician and thus to his power base and the clientele and constituencies supporting him. Thus, while planning may be a significant tool for solving substantive problems on both the comprehensive and functional levels, its proponents face major difficulties at the legislative as well as executive levels of politics.

Many planners are acutely aware of the problems of providing plan products for political executives and legislators. While they try to meet political needs, they must simultaneously wrestle with the problems of skills and staff development in functional and comprehensive planning and try to assist in evaluation and improvement of agency programs. A recent paper by Richard Slavin had some interesting suggestions about this problem.[15] Realizing that basic goals are of long-term significance, running beyond the terms of political office, Slavin suggests that a strong institutional and supportive base be established for reaching consensus about goals and their implied policy directions. He would do this through the establishment of citizen advisory councils related to the planning agency, which would promote these goals as policy

14 Schneier, Edward "The Intelligence of Congress" **The Annals of the American Academy of Political Social Science.** Vol. 388, March, 1970.

15 Slavin, Richard, **The Expanding Dimensions of State Planning.** Unpublished paper presented at American Society of Planning Officials, National Planning Conference, New York City, 1970.

directions, and help in securing public support. This would provide an overall framework for government direction and management and be available for use by the chief executive.

Working with the guidance parameters provided by goals, Slavin envisages policy advice as the planner's main input. This policy planner would draw advice from the efforts of technical staffs but would not be completely dependent on comprehensive or functional efforts. Further, Slavin would maintain a small policy planning staff to be used for analysis and resolution of specific issues. These recommendations show a good sense of the drift of planning agencies in organizing response systems for supplying quick aid to political executives. Slavin's call for citizen involvement in developing a goals framework is valuable. However, his approach needs supplementation along the following lines as a ground for future progress by planning agencies.

First, goals development, with citizen participation, should be followed through. Here, comprehensive and functional planners can add system design and construct knowledge and skills for functional planning to the citizen perspective.

Second, policy relation to the executive office should be maintained, drawing upon perspectives and skills outlined earlier and a goals framework, especially in the absence of plan products.

Third, staff resources for issue work should be available, but as noted earlier, different problems call for different skills and issue work teams should be interdisciplinary rather than drawn from any one field or agency.

Fourth, it is necessary to push ahead with comprehensive and functional planning efforts on a realistic basis. Thus there should be a sober assessment of the goals and targets desired, the effort involved and benefits to be achieved. This effort will take discipline, a sense of focus and knowledge of the technical procedures that must be employed. It is essential that staff assigned to these jobs be protected against diversion.

Fifth, the achievement of functional and comprehensive planning programs will not occur if there are no systems for adequate interdisciplinary review of agency efforts. If we are to go from plans to realities it is essential that planners, budgeters and other administrative personnel work cooperatively and secure a solid commitment to this effort from legislative leaders.

A general program related to the political needs of the executive and embodying these elements would allow the director of a planning agency flexibility and options for making input as required. He could specify the substance and nature of the input, relating it to the progress and problems involved in functional and/or comprehensive efforts. Most important, perhaps, is that his performance would be based on firmer institutional supports in the policy area, and clearer understanding of the assistance to be provided by his agency.

X. AN ORGANIZATIONAL AND THEORETIC PERSPECTIVE ON PLANNING

Up to this point we have sketched a broad and many-faceted perspective of the planning field and its uses in government, looking at its past and ahead to potentials for growth. Two additional perspectives can be gained on the contributions attempted in this paper, by relation to an organizational framework on the one hand and to some elements of planning theory on the other.

Organizational Levels of Planning

In establishing and running a comprehensive planning organization, six task levels emerge distinctly. One deals with scope of the organization in deciding on relations to governmental and private sectors. In the past this problem has been minimal as planning in the United States has been concentrated at the local level. With growing Federal and state involvement in planning, the necessity for deciding on extent and kinds of intergovernmental relations has come to the fore.

Once organization scope has been decided, processes of relation among various government levels have to be worked out. Various review and regulatory devices and coordinating systems have to be established. Determination of zoning and capital review processes, coordination of programs among agencies at each level and between local, state and Federal organizations each, require staff

input. Recently a HUD-sponsored task force reported on a unified planning requirements system.[16] While this report recognizes substantive problems of defining functional and comprehensive planning approaches, its main concern is with processes of horizontal and vertical forms of coordination — that is, coordination of programs among Federal agencies at one level and the coordination among other levels of government, Federal, state, local. This paper's discussion of five management perspectives could be viewed as an attempt to provide better substantive grounds for such coordination.

The third level, that of choosing the substantive material of the organization's work is one of two fulcrums on which the planning discussion in this paper turns. Given the vast variety of materials and options it is possible for a staff and its leadership to run off in all directions at once unless decisions on this score are made.

A fourth level deals with methodologies needed for appropriate treatment of subject matter. This is the second fulcrum of this paper. In functional planning, establishment of functional dominance based on occurrence of critical events needed to achieve goals, indicates a necessary methodological and analytical approach. In comprehensive planning, tasks of optimum system design for basic constructs and target setting within bounds of resource availability and political feasibility, direct attention to appropriate methodologies. Methodologies as discussed here, grow out of prior consideration of definitions of substance, requirements for substance treatment and needs for output. This approach differs from those used to introduce new systems to planning in the last decade. PPB, computer programming, etc., have been hailed as salvation for the hard job of planning. Meanwhile salvation has not appeared and instead we should recognize that these tools are valuable only as related to appropriate planning techniques.

A fifth level centers on evaluation. If planning is to be meaningful, there has to be some way of measuring progress. Development of criteria and relevant information systems to accomplish this is essential. Recent Federal emphasis on social indicators is one example of this concern.[17] This paper has attempted to indicate some of the comprehensive planning criteria that might be measured.

A sixth level deals with implementation. All the foregoing leads up to this stage. Some implementation aspects are necessarily handled through "functional dominance" as an analytical input to achievement. In comprehensive planning there is appearance of this aspect in developing a values framework for optimum system design. However, once analysis has been completed, the actual machinery for securing adoption and use of the plan has to be considered. Here, the interface mechanisms and processes come into play on the intergovernmental level as cited above. More important, however, is the relation to the political sphere and some of these problems were outlined above, with suggestions for a general orientation in relation to it.

In summary, while this paper reaches into and affects many organizational levels, it is through the analyses of substance and relevant methodologies that these suggestions have been reached.

Earlier Planning Theory

Much has been written about theories of planning. The treatment presented in this paper will be compared briefly to four American approaches.

Robert A. Walker in the "Planning Function in Urban Government," published in the early 1940's treated planning in terms of its administrative position within the framework of local government organization.[18] His emphasis on subject matter was incidental, mainly involving physical development, land use, zoning regulation, the physical master plan, transportation, etc. Walker's main concern was in relating the planning function to executive authority. Using the "levels" frame of reference given above we would say that Walker was concerned with the processional relations aspect of planning. When it came to substance and method relations, Walker had little to say. In a political context Walker saw planning as policy advisory

16 U. S. Department of Housing and Urban Development Interdepartmental Planning Requirements Task Group, **A Unified Planning Requirements System.** Unpublished working paper, December, 1969.

17 U. S. Department of Health, Education and Welfare, **Toward a Social Report.** Washington, D.C.: U. S. Government Printing Office, 1969.

18 Walker, Robert Averill, **The Planning Function in Urban Government,** 2nd. ed. Chicago Press, 1950.

in analyzing current resource situations centering around land use, transportation and housing problems.

Lewis Mumford has been one of the most influential and widely read advocates of the need for urban and regional planning.[19] A study of Mumford's work shows no self-aware analysis of what the technology or substance of planning is about. Mumford assumes that he knows this and has written, pulled together and commented upon major work on the physical environment. In his urban and regional commentary, social or human nature factors are handled mainly in terms of physical environment relations and rarely, if ever, in terms of their own system relevances. In essence then we would say that the environment and not planning is at the center of Mumford's attention.

Rexford G. Tugwell's career as "Brains Truster," aide to Franklin D. Roosevelt, Chairman of the New York City Planning Commission, Governor of Puerto Rico, political science theorist, biographer and historian has been varied, rich and productive. His "The Place of Planning in Society" has been regarded as a thoughtful discussion on the growth and uses of planning.[20] Tugwell's view of planning is evolutionary, institutional and executive, and his main concern seems to be with the process of comprehensive planning and its realization. It is evolutionary as planning grows as a response to increasing complexity and scale of society. The major characteristic of that response is formation of intelligence centers which will collect information, analyze problems and allocate and direct flow of resources. These centers become specialized organs or institutions of government charged with major powers and responsibilities for carrying out these tasks. Tugwell's view of the planning agency as having executive functions is very different from Walker's. For Tugwell the planning function includes the conforming, bringing together and development of resources not only through study but in the power to implement by directing resources to achievement of specified goals. The planning function would have the final decision but one, and that would belong to the chief executive and the legislature. With respect to the other agencies of government, the planning agency would not be primus inter pares but beyond, as a fourth power of government. Tugwell's views are provocative and open to argument. However, aside from a generalized discussion of dominance, Tugwell, like Mumford, assumes the knowledge of substance and method with which planning has to deal.

Advocate planning grows out of a political position concerned with interests of minority and poor peoples. It has become identified also with protection of consumer interests and the environment and opposition to the Vietnam war. Essentially the advocate position is a value-structured one, having two aspects. In one it identifies disadvantaged groups or interests and proposes programs or policies for amelioration. In the other, it attempts to define structural components of society that have resulted in disadvantage and suggests reforms. It seems to have had more success with the first aspect than the second. In relation to the comprehensive planning process, the advocate position appears as one element in the political process which helps to set parameters for optimum system design. The advocate position does direct attention to client group needs which might be disregarded and draws attention to structural defects of social system operation. In this it tends to operate in areas relevant to today's social problems. Beyond this, the advocate position has little to say about the substantive nature of planning or its methodologies.

XI. PLANNING CONTEXT AND SOCIAL INDICATION

These considerations of the conceptual technology needed for planning can be used in many ways to evaluate various approaches to societal problems.

For example the various components of the comprehensive planning constructs can be used as possible guidelines for higher education planning; or the sufficiency of techniques of executive management at the central levels of government can be reviewed in terms of the various operational procedures presented earlier. At this point, however, we wish to show how these planning

19 Mumford, Lewis, **The City in History**. New York: Harcourt, Brace & World, 1961.
20 Tugwell, Rexford G. **The Place of Planning in Society** San Juan, Puerto Rico: Commonwealth of Puerto Rico, Office of the Governor, Puerto Rico Planning Board, 1954.

approaches can be brought to bear upon the problems of developing social indicators. We will see that shifts in the contexts of our thinking are required as a result. Further we believe that the required shifts methodologically and substantively coincide with or take account of major criticisms of our society and of significant aspects of American social science.

Such a shift is important because the dissatisfactions displayed among bypassed groups and youth indicate that our ways of looking at and attempting to manage various aspects of society are not sufficiently pertinent to human and social needs of many kinds. While government and private industry have been reproached for being improperly aware of and responsive to these needs, it should be noted as well that many approaches and tools of social science may merit the same indictment. In accordance with this perspective, if we were asked to characterize in pithy form the nature of the shift required in social indication, the following would be stated. "In the past forty years we learned how to count. Now we must learn how to value."

Of course a generalization of this kind is subject to many disclaimers. Yet in terms of major tendencies, it is likely to be more accurate than not, and may express the nub of the problem in dealing with contexts of social indication. In the following pages we will review briefly some reasons for shortcomings in bureaucratic approaches to social indicators. Then the implications of planning approaches in this paper for the evaluations of human experiences will be presented. Finally the implications of social and psychological comprehensive plan constructs for the involvement of the social sciences are brought into the picture. Through review of the work of two major sociological figures Robert Lynd and Talcott Parsons, potential deficiencies in the ability of social science to contribute to development of social indicators are analyzed and suggestions given for shifts in analytical perspective.

Problems of Measurement in Government

Proportionately, the growth in societal scale in this century has been more than matched by the increases in government activities, services and involvement with people. A large technical and resource using society with high densities and frequencies of interaction among components, requires more and often new regulation and services to deal with ensuing problems arising from human plus environmental conflicts. It is understandable that initial management efforts in dealing with many and diverse phenomena and their regulation, would center on definition for purposes of stabilizing and routinizing management procedures; that, in the absence of adequate psychological, social science and planning disciplines, measurements would emphasize government investments in terms of dollars spent, capital facilities produced and body counts regarded as either personnel required or processed through a service system or analyzed through a classification system stressing acquisitions like income, housing, education, etc. Again note that complete accuracy is not claimed for this statement, but these ways of thinking about people in society and their problems have represented a major perspective in government management approaches.

Of course counting is important and taking note of acquisitions is necessary, but any major tendency for dealing or interacting with people as if they are things or numbers represents a very peculiar perversion of government purpose and responsibility. It is probable that some people treated in this way would act to arouse hatred and reaction with consequent acknowledgment of their existence, in preference to being treated as a cipher. Others might tend to avoid any such system treatment and expected or desired reactions. In other instances, government inputs or investments of one type might have little or no conceivable relation to desired results.

As public administrators, government managers and social scientists have become more aware of problems such as these, they have tried to develop new management tools and inculcate new management attitudes and perspectives. Among the most recent has been the attempt to introduce planning-programming-budgeting systems, PPBS. This effort has not been very successful for a variety of reasons. One reason is that planning has been inadequately comprehended and we noted this. Another reason is that program managers and their staff find it difficult to move beyond the purview of

their immediate responsibilities and in addition often resist what they regard as the intrusion of "outsiders." Thus one report on the New York State effort with respect to the many agency programs found that, "a number of agencies could find no appreciable benefit from all the work — they doubted that the new reporting system increased their understanding of purposes and program relations. The fact was that . . . some agencies had not been able to identify goals adequately, had not differentiated between a program size indicator and an effectiveness measure."[21] Our earlier noting of the problems in the New York City PPBS effort is more evidence of the difficulties in changing bureaucratic perspectives.[22]

Thus there has been great difficulty, even at a program level, for attempts to move to a goals oriented approach which would specify results on an output basis and therefore open the way to significant human nature and social system evaluations. Perhaps some resistance and skepticism about new approaches is always justifiable. But sticking to old approaches means emphasis on inputs with a major stress on dollars, and little attention to outputs as consequences for people. Most of our present indicators in the social area lend themselves to this counting and input emphasis. In this sense they represent what we have learned to do in the last forty years, but while important, they are not sufficient for the concerns raised in today's social milieu. As we learn more about how to measure on relevant value scales, we will still face the difficult job of bringing government bureaucracies around to use of such tools.

Approaches in Planning

One of the surprising non-events in the last decade was the failure of planning to play a major role in the social area. In a period of tremendous government investment in social and human problems, the professional planners were engaged only minimally in this area. There have been many articles and public discussions by planners about these problems and related programs, but in a working context the thrust, direction and emphasis have been provided by social workers, educators, psychologists, and public administrators.

Partly this failure occurred because of the long tradition of heavy emphasis on physical development problems. This tradition is reflected in the curricula of most planning schools in the country. Partly it occurred because planners have been confused about and have not looked adequately at the methodological foundations of their field. They have not adequately understood the grounds for functional and comprehensive approaches to planning or the similarities and differences of the two. They have not noted the rise of a third type, a minimal approach — "distributive planning", which along with community design may be the most prevalent type of planning practice in the country.

Without clarity, it is natural that the weight of practice would follow historic and traditional lines in the physical development area and that there would be a strong tendency to transform social concerns into physical development programs. Obviously the social and the physical are not unrelated but when the planners did get involved in "social problems", their response was mainly in physical development terms. Finally the confusing of social and psychological contexts with functional ones, has compounded the use of analytical and operational tools, not only in planning but in government generally, among all types of professionals.

If there are confusions of context about approaches, and we cannot therefore easily separate inputs from outputs, and in fact label the first as a designation for the second, our analytical and problem solving powers are weakened tremendously. And the usefulness of indicators — whether they are numbers or value oriented, is limited at best. To overcome these problems we attempted to clarify the operational grounds for three types of planning with designation of implications for the relations of functional inputs to social system and human nature outputs. Now we will discuss how the designation of these planning types can affect the conceptual technology of indicator development.

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21 Rosenberg, Fred, **op. cit.**
22 Fasteau, Brenda Feigen, **op. cit.**

Distributive Planning and Social Indication

As we noted, distributive planning is the series of acts which relate specified events (like capital facilities investments, for example) to the distributive character of other events — such as present and projected population characteristics, economic transactions, transportation flows. Analyses of the relations among these data are in some measure the basis for decisions on resource allocation and distribution.

In relation to indicator development three points should be noted about distributive planning. First, distributive planning depends upon the occurrence of other phenomena and direct reaction to them. Thus, its indicator role as a response is a dependent one. Second, response to indication occurs as an input response. For example, if some children need school seats, build a school; or if some people have health problems provide a certain number of health services, etc. In this, there is no measure of the effectiveness of services provided. Third, the nature of the distributive planning response can be determined by the nature of the data received about the phenomena without anyone knowing whether the received data is symptomatic of the problem or deals with basic causes. Thus the response may be misdirected.

In these respects the indicator uses involved with distributive planning are no different than the usual types of indicator discussed in much social science literature. Thus while it is important to distinguish distributive planning from other types, its limitations should be recognized. Given this understanding, we should recognize that program managers often use this technique to allocate resources in response to indicator signals of various phenomena.

Functional Planning and Social Indication

A key concept in the performance of functional planning is "functional dominance." The realization of planning goals (obviously necessary if planning is to be useful), has several requirements for the functional process: first, setting goals and drawing plans in terms of achieving them; second, defining how to move from plans to goals; third, identifying the means for doing this; fourth, identifying critical events that must occur and milestones that must be passed to reach the goals; fifth, identifying the operational conditions that allow these critical events to occur; sixth, assessing the steps needed to protect or create these operational conditions.

This deals with establishing the operational environments and the means that allow goals to be achieved. This is done by telling how to attain dominance over or to influence these operational environments enough to effectively employ the means to achieve the functional goals. The term "functional dominance" is shorthand for this process.

The key role is the important and demanding responsibility for analyzing the operational environment of programs, so as to establish the necessary climate and structure of events for achieving agency goals. Failure to establish the nature of these conditions means traveling blind and risking a high rate of program failure. The functional planner must shape programs and environment to each other, determine the necessary and the feasible. He must compromise somewhere between the vital and the unlikely, on the program side, and determine the acceptable and the necessary parameters of change on the environment side, avoiding change which could damage the pursuit of agency goals. This is "establishing conditions of functional dominance."

This task requires a perception of the underlying elements which create and continue a problem. The interaction systems in which underlying elements are involved require understanding of the linkages among social, economic and physical environmental spheres and their components. By viewing proposed solutions in this context, one can trace ways in which they would be effective or ineffective and can further analyze consequences. As noted earlier, this approach is also linked to that of the scientist. To analyze and determine conditions of functional dominance requires a coherent understanding of the structure and nature of relevant events and human behaviors. Knowledge sometimes derives from everyday pragmatic observation, but it is also drawn from scientific work and theory.

In using this kind of planning there are a number of important implications for the establishment of

social indicators, some of which are vastly different from usual "indication" concepts. First, and most significant is the fact that the planner must build a model of how he hopes to achieve his results. In this context the key indicator is the achievement model itself, and not any single phenomena. Thus the nature of the scientific problem shifts from observation of some phenomena to which response may be made, to the question of whether we have sufficient understanding of the necessary conditions for occurrence of the phenomena and for changing them so that more desirable events occur. This achievement model as the primary indicator in social aspects of functional planning is a necessary technical concept that is not commonly used in writings about social indicators.

Admittedly the achievement model is often very difficult to formulate, yet its absence in the field of planning with emphasis given instead to indicators of phenomena occurrence has handicapped progress. For example, great attention is given in a variety of ways to documentation and indicator reporting of the occurrence of housing problems. Relatively little attention is given to the development or testing of achievement models that give us some indication of whether it is possible, or of what alternatives are available to solve these problems. The indicator as a description of the existence of the problem does not help towards its solution. Functional planning shifts attention from the counting of events to the ways of dealing with them.

Differences appear as well in the formulation of goals. A frequent response to problem indication is that of setting a goal to abolish the problem. While the achievement model uses this as a first approach, the construction of the model with the discovery of ways of dealing with the problem, may allow or require reformulation of goals in a more realistic or effective manner. Thus what may begin as "blue sky" attempts to eliminate all slums or meet all housing needs, may have to be reformulated as specific programs that are expected to deal with specific components of these problems in a given time.

In any complicated technical process there are usually important internal components known mainly to the professionals in the field, which are regarded as significant indicators of the state of affairs. In national economics for example, data on investments, credit and money supply are so regarded. Similarly we can say that such technical steps as identification of means for achievement, necessary operating conditions and protective steps can be so regarded. These in a sense are non-statistical indicators of ability to get a job done. Given these elements, however, there is still one concept, that of milestones or critical events, which must be used to gauge progress towards goals. Without such interim measures explicitly identified, we have no ways of judging if we are on the right track and succeeding. With its emphasis on the achievement model, functional planning allows and calls for this kind of internal indicator measurement in technical evaluation of work effectiveness. This too represents a major difference in the contexts of indication required for functional planning.

Comprehensive Planning and Social Indication

Once we deal with comprehensive planning the indicator problem changes in several ways. Where functional planning emphasizes the achievement model, comprehensive emphasizes a goals construct embodying the state of component relations in a major realm of existence. The primary indication problem then is that of constructing a model of such a realm, with identification of its major interactive components. Thus, as with functional planning, the ability to identify and develop the model is the primary task of indication which serves as a foundation for all other measurement efforts. The secondary indication problem then shifts to development of criteria for evaluating various stages or components of construct status as being reflective of the state of the system and of the relations and impacts of components upon each other.

As noted earlier in the sections on comprehensive planning, this construct technique opens the way for introduction of indicators bearing upon social system and human nature events. In this it provides a foundation for development of indicators centering on value concerns that previously had not been available in the planning field. Once again we would warn, however, that functional inputs from programs of any kind should not be identified automatically as being "social" unless

their relevance to social system or human nature concerns can be demonstrated. In taking this stance we are arguing against the majority of writings in the indicator field which designate as social almost any functional program item in a large variety of traditional social areas. In our context system, relevance to social and psychological areas determine the degree to which programs or data from any functional area can be regarded as having social implication.

Social Indication and the Adequacy of Sociological Approaches

If we wish to use or develop the construct or modeling technique of comprehensive planning for social indication, questions must be raised about the ability of the social sciences to contribute to such use. Earlier, in the discussion on comprehensive planning we noted some problems in this area. Undoubtedly many sociological studies can be cited in which scientific analyses of human involvements have had important consequences. Alexander Leighton's study of relocation of Japanese-Americans reported in "The Governing of Men" is one example.[23] The Supreme Court decisions on segregation of and discrimination against Negroes were influenced by the many studies showing the bases and effects of such behavior. Undoubtedly, there is a great deal of material on labor-management relations which has influenced the perceptions and behavior of both parties. With these and other examples we might say that the sociologist of "situations" has shown sensitivity and awareness about human feelings, emotions, as an influential element in social behavior. However, when we turn to the sociology dealing with community behavior and generalized theory, man as a feeling, responsive being, tends to disappear. Since an emotional conception of man is at the center of our social and psychological constructs for comprehensive planning, and is thus basic for social indication, we would like to show how these limitations of perspective appear in major sociological work with consequent distortions of the contexts and results of analysis. In shorthand form we might call these emotion eliminators, "sociological determinists." Following this discussion we will then present some brief suggestions for expansion and reorientations of sociological perspectives.

A large number of eminent sociologists would claim that emotions are determined by social structure and culture and do not constitute an important force influencing these. Essentially they see a one way flow of significant influences in which the person responds to the society in many ways, but the society does not respond to the person or persons in significant ways where emotions are involved. In contrast, we should note that sociologists of almost all persuasions often prefer to talk about values and culture. Usually there is more information about values expressed in many documentary sources. Values can be handled on an abstract level, incorporated in symbolic and representational systems of one kind or another, and often be used as a form of inferential substitute for talking about or noting how people really feel about living, or what they feel. Our intention is not, however, one of delivering a treatise on sociological uses of value analysis at this moment. We are just noting that proper attention to emotional factors in the past may have been subsumed under the various headings of value analysis, and eventually swallowed by this emphasis. At some time in the future it might be interesting to look at the relations of emotions and values, not only in sociological analyses, but in real life situations as well.

The determinists are not unaware of emotions. Often they are very much so, even to the extent of making responses to situations a central part of their work as John Dollard has done.[24] However, even in these cases the basic position is that of showing emotional behavior and feelings as a product of societal conditions and events. There are a whole range of positions and treatments ranging from dismissal to acknowledgement to concern, that may present emotions either as unimportant or as serious elements in man's makeup and useful for sociology. However they are presented as being determined by the structural and cultural conditions of society, with little or no attempt to see how the existence of emotional needs and responses — remember we are not talking about values or ideas, affects and has affected these same

23 Leighton, Alexander, **The Governing of Men.** Princeton Press, 1945.
24 Dollard, John, **Caste and Class in a Southern Town.** Garden City, New York: Doubleday and Company, 1937.

structural and cultural conditions. In this we are not arguing for uniformity of affect among all cultures, but would stress the importance of examining the basic emotional forces as they interact with culture and social structure.

This tendency of sociological analysis to omit man as a human being has been a major element in sociology for a long period. However, these attempts are not soundly based, because it is possible to demonstrate the errors of perspective and method arising out of such a limited sociology. A brief look at some aspects of the work of Robert and Helen Lynd will show this was so for the period preceding the rise of Parsonian functionalism, which has dominated the American sociological scene since World War II. Some comments on Parsons will follow.

Sociological Determinism in the Middletown Studies of Robert and Helen Lynd.

In the Middletown Studies of the Lynds one source of determinism arises in assumptions about the "givens" of Middletown's people.[25] At a number of points the people of Middletown are treated as a whole with regard to having and sharing certain values. Although, later on, differentiations in attitude are introduced as a result of social class, there is still a general position running through the study about general sharing of major sets of values. These are givens in terms of which all the people of Middletown are supposed to orient themselves. When behavioral and attitudinal variations are introduced, they are seen as consequences of socioeconomic status positions. Thus a businessman is described as having one position towards state or Federal support of the unemployed or hungry persons. The hungry person will have another position. In short, social position determines attitude and behavior. The technique for getting at this result is descriptive on the surface, without an explicit determinative statement, but the implication and conclusions to be drawn are generally clear. Where class distinctions are not determinative, situational ones, defined in terms of self-interest are. For example, religious institutions seeking to preserve their influence, attempt to compete with secular influences by becoming more recreationally oriented. Thus the picture emerges of man's behavior as determined by his class position and his situationally oriented self-interest.

Undoubtedly, factors of this kind do help to explain, understand, often predict a great deal of behavior and response to situations. Yet the underlying assumption in such an explanatory codicil is that as sociologists and scientists we seek a one dimensional level of response which is in tune with what seems to be the understood paths of behavioral requirement and possibility in the situation. These understood paths may be defined by the people involved or established by the sociologist's sense of the situation. However, people are complex, and the emotions and ranges of response involved in situations often are more numerous, wider and deeper than assumed in many sociological explanations or by the involved people themselves. Thus the adequacy of motivational or outcome analyses framed in situational terms, either implicitly or explicitly, often is suspect. Although the Lynds do give tones of emotional reaction to various situations by people variously located in the social structure of Middletown, we find a determinism of response most often arising from the situation, instead of from the nature of the people involved. It is in this sense that although they are describing a relatively complex community in the twentieth century United States, their sociological determinism is as definite as that of an anthropologist describing a small tribal group or a sociologist describing race relations in the American south in the 1930s.

This emergence of a deterministic outlook is surprising, for the political awareness of the Lynds in relation to problems of class conflict and their exploration of this possibility in the Middletown situation of the 1930s follows from an aspect of Marxian political sociology which allows for the potentiality of man determining his society instead of being determined by it.[26] In contrast to this potentiality however, what the Lynds found in relation to labor as a group for example, was a locking in and limitation of perspective and hope by

25 Lynd, Robert S. and Lynd, Helen Merrill, **Middletown** New York: Harcourt Brace and Company, 1929; Lynd, Robert S. and Lynd, Helen Merrill, **Middletown in Transition.** New York: Harcourt, Brace and Company, 1937.
26 Ibid. **Middletown in Transition** pp. 72-73.

values and controls in the ongoing culture. "As symbol and reality thus draw apart, the scene would seem to be set for the emergence of class consciousness and possible eventual conflict . . . but dreams when they express urgent hopes and are heavily supported by the agencies of public opinion, have a habit of living on in long diminuendo into an era bristling with palpably contradictory realities. Middletown labor is not markedly aware of any crystallizing status or of the tenuous basis for its dreams. So it tends to be oblivious of the apparently fundamental alterations in the American ladder of opportunity: it continues for the most part to view its disabilities as unfortunate, temporary setbacks in a naturally ordained forward movement."[27] This conclusion on the limits of labor's outlook is accompanied throughout the work by a pervading sense of people being done to. If technology changes, people adapt to the technology. If a depression occurs, people cannot modify it but must adapt to it. If values indicate certain behavioral modes, people cannot respond to "objective" conditions of change in environmental situation but remain prisoners of the value system and let the change roll over them, thus becoming doubly embedded in a world of contradictions.

Given the methodological framework and the accuracy of observation, there is little reason to doubt that the Lynds found what they found. Yet, at times, even they were not satisfied with the accuracy of their portraiture in regards to the fullness of life. They were aware of vital components being omitted and either through choice, lack of recognition or knowledge on how to incorporate such material in their work, these components were left out methodologically, but alluded to observationally. Note the following passages. "With all this freshly in mind, one went down across the railroad tracks and stood at the gate of the General Motors plant watching the men come off the job in the afternoon: Here was a horde of men heavily on the young side, walking rapidly toward the parking space for employees' cars, laughing and talking in groups of twos and threes about baseball, exclaiming, 'Boy! I'm goin' home and have a steak'; or 'what's the weather goin' to do Sunday? We wants to drive up to the lakes'. The whole feel of the scene was on the easy, resilient side. Here was no crew of helots or men cowed into furtiveness. Half an hour later, as one walked the tree-shaded streets, one saw these men mowing the lawn, painting the garage, playing "catch" with a small son, smoking a pipe over the evening paper on the front porch.

"Perhaps it was because it was June; part of it undoubtedly was because these men had jobs again after the long layoff; part of it was probably due to the general optimism in the air locally. But something else was undoubtedly present, too, to account for these contradictory elements in these working men. Actually, both a deep concern over their insecurity and an almost happy-go-lucky indifference exists together inside the skins of Middletown workers. The very presence of the former helps to create the latter as an emotional defense enabling the sequence of big and little incidents of daily living to make a tolerable degree of sense."[28]

Observations of this kind fall outside of the methodological framework established by the Lynds. Obviously they were aware that these implied different sets of human reactions to life situations going beyond the ones presented in the major portions of "Middletown in Transition." Such material was accommodated or absorbed in introduction of a concept like "happy-go-lucky indifference" to cover whole ranges of intimate experience and interpersonal relations. This treatment raises some very interesting questions about paths in development of the history of ideas. The Lynds' book was published in 1937. At this time and for a year or more earlier, Abram Kardiner and a group of anthropologists at Columbia University where the Lynds were, had been collaborating on analysis of the relations between personality and culture, with strong emphasis derived from psychoanalytic work.[29] None of this perspective appears in the work of the Lynds. Thus the impression appears that either by design or by staying within a particular framework, the Lynds ignored a whole realm of human relations and emotions.

This does not mean that the Lynds ignored emotions. What happened was that the emotions they

27 Ibid. p. 72.
28 Ibid., pp. 452-453
29 Kardiner, Abram, **The Individual and His Society.** New York: Columbia University Press, 1939.

handled were treated through the situational setting and socio-economic class analyses referred to earlier. Indeed it takes little, if any, extrapolation to see that in emotional terms they were analyzing a series of continuous security-anxiety and identity crises caused by transformations of the economic system. In this sense, there is an emotional substratum underlying their whole approach which is not explicitly recognized. At times it breaks out so strongly, in expressions of frustrations, anger, despair or in passages like the one quoted above from page 452-453, that we can almost hear the Lynds asking themselves, "What do we do with this? How can we handle these expressions and observations in the kind of study being done and with the methodological system being used?" Then just as surely as this particular perceptual door has opened, they close it and turn again to history and class analysis, but throughout the pressure of feeling runs strongly against the surfaces of their words.

In part the Lynds are able to contain this pressure because feelings expressed often seemed to be their own in pointing up ironies of contrast between observational data and cultural belief. In part the pressure was contained because they shifted it to another level in the analysis of values. As the Lynds dealt with values, they seemed to be providing levels of emotional connection between what people hold dear and the institutional structures of Middletown society. However values and emotions are not the same things. More, several kinds of value can be related to specific emotions or several emotions may be related to one value. Thus, treating the two as somewhat congruent without specifying the particularities of relation confuses our understanding of the relations between the satisfactions of people and the social order. Yet, in one sense we should recognize that this treatment did represent an attempt to deal with some emotional levels of being.

The Sociological Determinism of Talcott Parsons

Since "The Structure of Social Action" appeared in 1937, Talcott Parsons has played a major, if not the leading role in the development of sociology. He has worked and consulted with many of the foremost sociologists, social scientists, and psychologists in our time and has attempted to take account of major concepts regarding the nature of man and the conditions of social being and order in his own work. His students and followers may be legion, and his influence has been felt in many, if not all of the fields of sociology. At the same time there have been probably more books and articles written on his work than on the work of any other contemporary sociologist. Where major sociological controversy has raged, most often it has been Parsons and the functional-structural school with which he is associated that has been at the center. Just as at the turn of the century it was reaction to Marx's work that provided a controversial core around which the development of sociology raged and grew, so it has seemed in the last two decades that many major growths in sociology have grown out of expansions of Parsons' work and reactions against it.

In viewing Parsons' work as it relates to our concerns with contexts of social indication, the conceptualization of human nature and social system interactions are crucial.

Essentially in Parsons' work, orientation to the social system becomes the focal point around which personality and culture are organized. This emphasis, as a restrictive analytical parameter, most completely affects work with the personality system and also the formulation of pattern variables. Personality in this context, is seen mainly as a resultant of social and cultural system inputs, and the flow of causation is presented mainly as a one-way interaction, and not a reciprocal one. Generally it is only at the level of the most basic viscerogenic and sexual needs that personality or the nature of human being enters as a conditioning or limiting factor. For those structures of behavior going beyond these levels, little if any allowance is made for other components of being human in affecting social systems and culture.

In this schema, the pattern variables play a major tool or analytical role as components for linking personality to the social system. As Parsons said, "The pattern variables are a conceptual scheme for classifying the components of an action system — the actor-situation relational system which comprises a plurality of unit acts. Each variable defines one property of a particular class of compo-

nents. In the first instance, they distinguish between two sets of components, orientations and modalities. Orientation concerns the actor's relationship to the objects in his situation and is conceptualized by the two 'attitudinal' variables of diffuseness—specificity and affectivity—neutrality. In psychological terms, orientation refers to the actor's need for relating to the object world, to the basis of his interest in it. For other levels of analysis, of course, this psychological reference must be generalized. Modality concerns the meaning of the object for the actor and is conceptualized by the two 'object-categorization' variables of quality—performance and universalism—particularism. It refers to those aspects of the object that have meaning for the actor, given the situation. The orientation set of pattern variables 'views' the relation of actor to situation from the side of the actor or actors; the modality set views it from the side of the situations as consisting of objects."[30]

A number of criticisms of this pattern-variable orientation can be made, some methodological and others dealing with substance and directions of the system. The major problems center around the use of the affectivity-neutrality pattern variable. Starting with the methodological points we note initially that the circumstances for use of "affectivity-neutrality" are confusing. The key element is the initial act in choosing to be affective; the important things or objects are those on which affectivity is expended. The actor is presumed neutral towards all else. One problem with this formulation is that while it may serve as an initial orientation, with the passage of time and experience, initial orientations are modified, and other factors which, presumably, were relegated to the "neutral" category, play an "affective" role in bringing about such change. Thus if initial orientations are modified within a situation and elements which were formerly "neutral" enter into an "affective" relation, the Parsonian dichotomization does not describe the real nature of choice and affectivity factors involved. It is more likely that a scaling system is involved with several or many factors in play at once and directionality of choice, as a situation develops, would be impacted if one or a number of factors changed significantly in their importance to the actor. This setting of the actor in a situation then would presume a knowledge of relevant components in his being and situation that would be likely to change choice and invested affectivity, if certain events occurred. Thus the analytical foci of the problem change to discovery of the elements of affectivity and of the kinds of events, either internal or external that could change their significance, exercise and direction. This is vastly different from the problem of whether or not affectivity shall be exercised, a way of viewing choice in this area that hides worlds of human existence and involvement in being.

Second, this criticism indicates that Parsons' analytical approach to emotional life appears as a stop-or-go, on-or-off system. Where the other pattern variables conceivably provide for dimensional continuation in combinations or grades of diffuseness—specificity for example, one is either affective or neutral and there are no gradations except as one is affective. In this sense of dealing with what one encounters and reacts to there is hardly anything at all to which one is neutral. So called "neutrality" is itself a form of emotional reaction. If this range of neutrality is so small as to be hardly existent, or really does not exist at all, then the key problems concern the nature of affectivity and not an affectivity-neutrality dichotomy of action.

This introduces a third methodological problem. Does neutrality really exist? The psychoanalytic and phenomenological approaches would disclaim such possibility. Psychoanalysts see human behavior as drenched with emotion. Indeed, Freud at one point used the metaphor of reason being a cork on the sea of emotion. The phenomenologists see "intentionality" throughout human behavior and Merleau-Ponty criticized experimental psychology for ignoring the importance of signification for governing the structure of behavior. If these views are correct, Parson's concept of neutrality has no validity as an indicator of emotional choice components.

When we approach problems of substance in the actor's choice of affectivity or neutrality, an immediate concern is the problem of unconscious orientations. Defense against the unconscious pro-

30 Parsons, Talcott, **Sociological Theory and Modern Society**. New York: The Free Press, 1967 pp. 194-195.

duces rationalizations of affective relations which are often not true. Thus fundamental perceptions of human relations to social and cultural systems can be distorted markedly. The problem here is that Parsons' concept of affectivity is not developed sufficiently to account for this element, and the resultant gross imaging of emotional behavior introduces room for severe substantive and methodological errors as we confront human realities.

This gross imagery of emotional life is a major substantive problem inherent in Parsons' pattern variable scheme. The gross characterization of affectivity, the on-or-off nature of the system, ignores vital differences of orientation and quality among emotional elements. Without having such differences in hand, we are forced to assume that the important component is the existence of affectivity as compared to its non-existence. On the other hand if we can assume that affectivity existence is never or hardly ever in question, then analytical emphasis falls onto the plane of determining the consequences that follow from starting with different affectivity orientations.

Fundamentally the system has the dual characteristic of being an orientation-consequence system, with the basic organizational structure being determined by the concern with analyzing social action and human behavior as they relate to the existence of social order. At this moment, for our purpose, it is not important that the Parsonian system seems to have a unidirectional rather than a reciprocal interaction relation among components. What happens however if we change the consequence component to one concerned with the kinds of affectivity among individuals and groups; if we distinguish even in crude dimensions, affectivity elements of enrichment, routine — which may be diffused with many kinds of emotion, and destructive feeling; if we deal with love and hate, or identity building and destruction processes, etc.? Then our problem shifts to determining social system and culture consequences for the occurrence of these events in human experience. Vice-versa we can ask what are the consequences for system and culture arising from these events. Moreover, in making the consequence components of our concern explicit and relatively clear, we establish a methodological ground for introducing greater flexibility into the use of Parsonian type systems in social analysis, for others can take the system and using other consequence concerns, examine and tinker with the system as it relates to these.

When this critical perspective on pattern variables is turned to Parsons' use of motivation, we find that he has not dealt with neutrality as an inherent aspect of human being in this context, but has instead retained a "gratification-non-gratification" axis of analysis based upon pleasure responses. As Parsons stated his point, "There is reason to believe that on the side of the learning infant, the most important vehicle of generalization is the pleasure mechanism, which must not be confused with sheer organic or instinctual gratifications in the particularized sense; whereas on the environment side it is the patterning of the system of sanctions which constitutes the element of generalization.

"The correspondence of these two patterns of generalization is the essential basis of the beginning of a new motivational structure which can be called the ego. This new structure in its external environment-oriented process — which may be called 'goal gratification' — concerns the relation of the child to a social object outside himself. In its internal organism-oriented process, it concerns his relation to a generalized neurological mechanism by which a plurality of gratification is organized to produce — perhaps to maximize — what has come to be called pleasure.

"In Freud's view, it is fundamental that the external situation and the internal physiological systems are to an important degree independent of each other. This is the basis of Freud's contention that the pleasure principle and the reality principle must be treated as analytically independent. At the same time, their integration is the most fundamental condition of the functioning of a personality as a system at this modal point of articulation between the organism at one of its boundaries and the external world at another."[31]

In this context Parsons' orientation to the problem of motivation shows clearly the concern with integrational articulation of personality and social

31 Parsons, Talcott, **Social Structure and Personality.** London: The Free Press of Glencoe, Collier McMillan Ltd., 1964 pp. 88-89.

system, at the expense of ignoring those components of motivation which express other aspects and direction for feeling. In a sense he has squeezed emotional life into a toothpaste tube called "order". His pattern variable scheme put the major weight on rational calculation aspects of being and microscoped emotional motivations underlying these into one dimension of having or not having an emotional attitude or motivation. Thus in terms of emotions as an integral component of human behavior, of having directive, expressive and gratificatory significance for individuals and social structure, Parsons' work as presently expressed, is not relevant. To be relevant his system would need modification expanding the weight of emotional factors and signification. Such a change would have major implications for analyzing and relating pattern variable dimensions and connecting them to social system orientations and consequences.

Basically, as we look at Parsons' whole approach from the standpoint of emotional analysis, we see that his work is anchored in achieving security against the storms of change. This perspective limits the relevance of his work, defines the thrust of his analysis and controls the forging of tools relevant to his purposes. Emotionally the continuum of feelings involved in security and anxiety permeates a great part of his work, and either takes priority over expression of other feelings or diminishes them to the point that they are lost from sight. This is why his analysis of the mother-child love relationship in "Family, Socialization, and Interaction Pattern," seems relatively flat.[32] Because of this constraint, the meanings of self do not emerge and the range of human emotions is severely narrowed in his work. This narrowing is one of the reasons for the relatively great emphases on rational elements in his pattern-variable scheme.

Yet with these diminutions of feeling, Parsons still had to make place for them in a formal sense through allowing the use of affectivity. What emerges more powerfully, although it is not conscious, is that the weight of his work emotionally falls on concern with ranges of security and anxiety involved in relations of the person to social system and culture. Thus we can see that while Parsons is a sociological determinist, his work is oriented strongly to concerns of a relatively specific emotional nature.

This limning of Parsons does not deny the validity or value of his work. In terms of dealing with social order through sociological analysis he has developed powerful and systematic approaches which have been found useful and insightful by sociologists the world over. At the same time, as this emotional analysis defines some limits of his work and its relevance to many problems being encountered in contemporary society, we may be in a better position to understand some of the attacks on Parsons and other functionalists. In many cases these attacks occur because the functional approach does not explain, adequately, deviance from the social order and conflicts of individual and society. It is hoped that this analysis of the shortcomings of the emotional structure of Parsons' work, explains in part the underlying nature of some of these attacks and why they were almost inevitable, given the nature of his system and the presence of sensitive and observant professionals who would note the discrepancies between events and theory.

An Approach To Social Theory: Social Network Analysis and Basics of Human Experience

As indicated above there have been many expressions of dissatisfaction with various forms of structural functional analysis in sociology. The major reasons for such dissatisfaction center around two elements. One, the emphasis on the homeostatic, self-maintaining equilibrium orientation of such systems and the degree to which behaviors are regarded as being oriented or controlled by the requirements of such maintenance. This applies even when elements allowing for system change are introduced into the technical framework of such systems. Two, a corollary of this first criticism rests upon charges that concerns with the nature of human behavior which produces departures from system requirements and indeed is often conducive to what might be called deviant acts, are not properly handled by such systems and are not taken into account as indicative of goal orientations in some manner related to fundamental purposes of being human.

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32 Parsons, Talcott and Bales, Robert F., **Family Socialization and Interaction Process.** Glencoe, Illinois: The Free Press, 1955.

In a sense, the Merton and Parsons work on deviance and manifest and latent functions represent attempts to deal with these criticisms by building a structural analysis of the forms and occcurrence of deviant behavior.[33] However, it is doubtful that these analyses of deviance as departure from institutional norms can simply be accepted and incorporated into a system which emphasizes the institution, whatever it is, as the product towards which human behavior is oriented. For 10 or 15 years the arguments about structural behavior systems have raged and critics have multiplied, but progress is still needed in the field of sociology in replacing or supplementing these systems. Essentially, there have been few, if any, accepted approaches incorporating the criticisms and the role of structural functional analysis within a new synthesis.

Meanwhile, new branches of sociological investigation continue which are not adequately incorporated by this system. For example, Goffman's work on forms and managing appearances represents an important addition to the field.[34] Thus, the problem that we face is one of taking account of human behavior and ends, along with the criticisms of structural-functional analysis based upon such consideration.

Fundamentally, the approach to be developed is one of specifying some basic requirements of being human in a psychological sense, and then examining the various forms of social organization to see the extent to which facets of psychological and physical being are realized in these matrices of interaction. In this approach, instead of seeing institutions as conglomerated wholes, we would see them as devices for more or less satisfying human needs. A concept of networks would be established no longer resting upon the patterning of behavior in an institutional context, but on looking at institutions from the subjective viewpoint, of the individual, in terms of asking where he can find the fundamental satisfactions toward which he is oriented. Thus the networks that we would establish would be networks of transactions through which man can realize his needs, and in this sense each need could be partially located in several institutional contexts and in parts of those institutions rather than in any one of them or in the whole of any one. Thus, if we establish that love-hate polarity represents a continuum of orientation to others, we would examine the extent to which various degrees of loving and hating are satisfied in the transactions that the individual has with other people in various settings. We might find that the possible manifestations of love for example, are realized in various places and with various people and these would constitute that individual's network of love relations. The same might apply to his hatreds. Seen in this way, no one institution would completely consume an individual's potential for loving. Instead, we would see that loving can occur in many and various places and we would then be led to ask what is it about the nature of being human and the nature of institutional organization and other people's behavior that allows or does not allow these appearances of love. A similar examination could be made for hating.

Thus, our emphasis would fall on the transactions of men which are related to fundamental human satisfactions. We would examine the transformations that occur in consumption and use of satisfactions and would regard these satisfactions as not only momentary and sense experiential, but as also having multidimensional and deep seated roots. In a sense, we would say that in relation to the qualities of human experience, there are rites of passage and that the institution and behavior associated with it could be looked at as providing room or no room for public or private expressions for these rites of passage. The networks then, in a sense, could be seen as zones of relevance for multi qualities of living and of course this pulls in the whole phenomenological approach which Alfred Schutz so beautifully developed in his work.[35] In this sense, the institutions are viewed as a device which more or less satisfy human need, but they cannot be viewed solely as satisfying one dimension because the characterization of man is multidimensional. Thus, as stated earlier in the material on comprehensive planning, there are multiple

33 Merton, Robert, **Social Theory and Social Structure.** Glencoe, Illinois: The Free Press 1957. See the papers on Manifest and Latent Functions; Social Structure and Anomie; Continuities in the Theory of Social Structure and Anomie.

33 Parsons, Talcott, **The Social System.** Glencoe, Illinois The Free Press, 1951. See Chapter VII Deviant Behavior and the Mechanisms of Social Control.

34 Goffman, Ervin, **The Presentation of Self in Everyday Life.** Garden City, New York: Doubleday. Anchor Books 1959.

35 Schutz, Alfred, **Collected Papers, Volume I, The Problem of Social Reality.** The Hague: Martinus Nijhoff, 1962.

evaluation systems to be applied to the analysis of human behavior as well as to institutional organization and expression.

There are three levels in terms of which these could be analyzed. One level concerns the substance of being human and the specifications of what this substance is. The second level concerns the forms in which interactions among people take place without a high degree of patterning — friendships and informal sets of relations among people would be included here. Perhaps this gets at many of the qualities of analysis and approach which have been taken by Simmel and are now being used by Goffman.[36]

The third level would deal with the institutional functional approach which has been so developed by Parsons and his followers. However, where man is swallowed by the institution in the Parsonian approach, we would stand the institution on its head and view it from the perspective of man and his needs.

This system would refer formal forms and institutions back to the basic psychological and physical context of being. It would relate psychology to sociology and provide an evaluative grounds and methodology for seeing the functions of institutions not only in terms of their own equilibrium and self-maintenance, but also in terms of the degree to which they serve human purposes.

XII. CONCLUSIONS AND CHALLENGES

This paper began with the statement that it might be called a study in job definition for planning. A need for recognition of roles and related performances and responsibilities is inherent in every growing field. In this respect planning is similar to other fields.

Many themes about planning and its uses have run through this paper, and each reader according to temperament and background will see some as more important than others. In our opinion a most significant theme relates to the uses of human nature components as a basis for planning and evaluations of society and government. Certainly many planners and writers have explored such matters extensively and well—see the work of Gans for example.[37]

We have attempted to give an operational setting to these concerns by showing how human nature concerns are intrinsically part of the comprehensive planning process and can be used for evaluation. Hopefully others will improve upon the relatively primitive efforts embodied here and put man in the center of planning.

If we were asked to define some of the field relevant operational challenges emerging from a theoretical paper of this kind, the following would be among those indicated.

How are we going to change the climate of government management from emphasis on counting and inputs as program justification to a concern with outputs and human value consequences of programs? This is a major problem of public administration and if it cannot be handled, all other advances in knowledge and theory will come to nought for they cannot, therefore, be applied.

How can we change the field of planning away from counting emphases and heavy if not almost total involvement in physical development to an equally significant involvement in social system and human nature aspects? If planning is seen and used properly, it can be a major policy-making and coordinative tool. However, if it is too one-sided and shies away from the evaluative stance involved in comprehensive approaches, many of our physical development and social policies will continue to fail as they have. Undoubtedly, some advances in specific program areas will be made, but some of our problems require a more knowing and thorough approach — take the child care-poverty cycle relationship for example.

Much of this approach to an evaluative stance for social indication presumes a psychology of man as a foundation. There is much disagreement about the nature of man and the test instruments that can tell us anything about him. Yet we seem to have some evidence in some areas that are significant. How can we pull together what is useful to us now? How can we get a better picture of the wholeness and complexity of man? With such a

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36 Simmel, Georg, **The Sociology of Georg Simmel.** ed Kurt H. Wolff, Glencoe, Illinois: The Free Press, 1950.
37 Gans, Herbert, **People and Plans.** New York, London: Basic Books 1960.

picture what can we do to develop better tools for perceiving the effects of government intervention on human well-being?

Our analysis of sociological determinism shows that its influence preceded the rise of functionalism. For a long period the institutional approach — with the community identified as an institution — dominated the field. The rise of structural-functionalism, although providing a far richer theoretic field for sociological work, did nothing to change the basic determinism of the earlier approach, although advances in psychology and social psychology forced an incorporation of such materials. Today, we have criticisms arising from observation, workers using phenomenological approaches, interactionists, theorists, Marxians, etc. The network approach proposed here should be seen as a supplementation not as a replacement of what has gone before. The challenge is to discover which approaches will prove most valuable in indicating the indicators we should use. Whatever the choice is, it would seem that those which only count need to be placed in a value perspective derived from such exploration.

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