SERVICES FOR HANDICAPPED YOUTH: A PROGRAM OVERVIEW

**PREPARED FOR THE DEPARTMENT OF HEALTH, EDUCATION
AND WELFARE, OFFICE OF THE ASSISTANT
SECRETARY FOR PLANNING AND EVALUATION**

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PREFACE

This is the first of two reports describing a comprehensive, 22-month cross-agency evaluation of Federal and state programs for assistance to handicapped youth. The Rand Corporation is performing the study during the period February 1972 through December 1973 under Contract No. HEW-OS-72-101 at the request of the Assistant Secretary for Planning and Evaluation of the U.S. Department of Health, Education and Welfare (DHEW).

DHEW officials defined two broad purposes that are reflected in the study. The first is to describe current Federal and state programs for service to mentally and physically handicapped youth in the United States, to estimate the resources devoted to various classes of handicapped youth, and to identify major problems of the present service system. The second is to assist DHEW officials in improving the system by evaluating current policies and providing information on alternative future policies to improve the delivery of services to youth with hearing or vision handicaps. The results of this study are intended for use by the Assistant Secretary and other Federal officials, by state agencies, by associations representing the handicapped, as well as by the general public.

This report concentrates on the first purpose. Another report, to be completed in December 1973, will concentrate on the second purpose.

An abridgment of this report, R-1220-HEW (Abridged), is also available, summarizing the major findings.

SUMMARY

This is the first of two reports on the findings of The Rand Corporation's cross-agency evaluation of government programs for the more than 9 million mentally or physically handicapped youth aged 0-21 who are impaired enough to need services not required by "normal" youth. Handicapped individuals included are those generally called visually or auditorially impaired, speech impaired, crippled or other health impaired, mentally retarded, emotionally disturbed, or learning disabled. Excluded are those whose problems tend to be more attributable to conditions in society rather than to a physical or mental disability, e.g., the "disadvantaged" youth.

For ease of presentation, we grouped the programs into areas by the five different types of agencies that administer them: health, welfare, education, vocational rehabilitation, and mental health and retardation. These programs offer a wide variety of services: activities intended to prevent the occurrence of handicapping conditions, the identification of the handicap, direction to the appropriate service providers, counseling, medical treatment, education, special training (e.g., in mobility or speech), vocational training, job placement, the creation and provision of sensory aids or other equipment, recreation and social activity, personal care, income maintenance, training of personnel to supply the services, construction of service facilities, and research and development.

In recent years all such programs expended nearly \$5 billion annually for a wide variety of services. This report provides a descriptive overview of the population of handicapped youth, the structure and functioning of the system, current state and Federal service programs, the resources devoted to various classes of handicapped youth, and the services delivered. Also identified are major problems of the present service system, both in the services delivered and in the institutional structure of some of the programs.

Over 50 major Federal programs help provide services to handicapped youth. Federal, state, and local government service programs and expenditures have expanded considerably in recent years and have very beneficial effects; but, taken together as a system, these programs and services have some major problems: inequities, gaps in service, insufficient knowledge, inadequate or deficient control, and insufficiency of resources.

A subsequent report, focused on youth with hearing or vision handicaps, will use this and other information in analyzing alternative means of improving the service system.

ACKNOWLEDGMENTS

We would like to acknowledge the cooperation and assistance of many people and organizations. Foremost, and without whose initiative this study would not have been conducted, are L. E. Lynn, Jr., former Assistant Secretary for Planning and Evaluation of the U.S. Department of Health, Education and Welfare; E. W. Martin, Associate Commissioner of Education, Bureau of Education for the Handicapped; and P. M. Timpane, former Director for Education and Social Services in the Office of the Assistant Secretary for Planning and Evaluation. C. H. Rieder and S. H. Woolsey, as project monitors for HEW, offered valuable guidance and considerable assistance in obtaining Federal data. R. B. Herman, Program Planning Policy and Coordination Officer of BEH, contributed significantly to the early structuring of the research. In addition, we received excellent cooperation in our interviews with more than a hundred Federal officials responsible for the many programs providing services for handicapped youth.

We are also very grateful for the cooperation, data, and suggestions for program improvement we received in our interviews with each agency serving handicapped youth in the states of Arkansas, California, Illinois, Massachusetts, and Wyoming. In addition, over 160 agencies in the remaining states each contributed significantly by completing our mail survey questionnaires.

Several dozen families with handicapped children, several organizations representing the handicapped, and several private service agencies have contributed their experiences and views, thereby adding a vital component to this research.

Several Rand colleagues and consultants also provided valuable assistance. R. E. Levien was responsible for the initial discussions with DHEW and provided very useful guidance throughout. J. Pincus, the manager of Rand's Education and Human Resources program, oversaw and helped guide the progress of the research. L. M. Wallen is responsible for study inputs based on the survey of families with handicapped youth described in Appendix E. S. A. Haggart, G. R. Hall, C. N. Johnson, K. Kellen, H. L. Moshin, L. L. Prusoff, M. L. Rapp, and E. Woodward all made valuable contributions to the research on which this report is based. E. N. Bowers and M. Roach provided excellent secretarial assistance during the conduct of the research and the typing of the manuscript. P. Y. Hammond and E. S. Quade reviewed and made helpful comments concerning earlier drafts of this report. We are grateful for their assistance.

CONTENTS

PREFACE.....	iii
SUMMARY	v
ACKNOWLEDGMENTS.....	vii
GLOSSARY	xiii
Part 1. SERVING HANDICAPPED YOUTH: A "CRISIS OF CONTROL"	
Section	
1. INTRODUCTION.....	1
Scope of the Research	1
Research Approach.....	3
Information Sources.....	4
Structure of this Report	5
2. PROGRAMS, SERVICES, AND PROBLEMS OF THE PRESENT SERVICE SYSTEM.....	7
Introduction	7
The Program Viewpoint	8
The Service Viewpoint.....	14
Problems of the Present Service System.....	20
3. MAPPING THE SERVICE SYSTEM: MODELS, FUNCTIONS, RATIONALES, AND THE POLICY PROCESS	23
Introduction	23
Models of Federal Institutional Roles	23
Functional Mechanisms.....	28
Rationales	33
The Policy Process	37
4. THE ISSUE OF GOALS AND SYSTEM PERFORMANCE	41
Goals as a Multi-Faceted Problem	42
Federal Goals.....	43
Contradictions and Other Problems.....	46

Part 2. CURRENT SERVICE POLICY

5. VOCATIONAL SERVICES TO HANDICAPPED YOUTH	49
Overview and Summary	49
Roles and Goals	53
Current Vocational Rehabilitation Programs	58
Other Vocational Programs	79
Survey Responses from State Vocational Rehabilitation Agencies	81
Previous Studies and Data Availability	82
6. EDUCATION OF THE HANDICAPPED	89
Overview and Summary	89
Federal Programs, Roles, and Expenditures in Education of the Handicapped	94
Special Education Programs in the States	109
State and Federal Expenditures for the Education of the Handicapped	123
Survey Responses from State Education Agencies	126
Previous Research and Data Availability	127
7. FINANCIAL ASSISTANCE TO HANDICAPPED YOUTH	132
Overview and Summary	132
Roles and Goals	137
Current Financial Assistance Programs	139
Other Social Welfare Agency Services	157
Survey Responses from State Public Welfare Agencies	159
Previous Studies and Data Availability	161
8. FEDERAL AND STATE HEALTH PROGRAMS FOR HANDICAPPED YOUTH	164
Overview and Summary	164
Roles and Goals	170
Current Maternal and Child Health and Crippled Children's Service Programs	172
Current Medicaid Program	196
Other Public Health Programs	201
State Crippled Children's Service and Public Health Agency Survey Responses	205
Previous Studies and Data Availability	212
9. RESEARCH: THE NATIONAL INSTITUTES OF HEALTH	221
Overview and Summary	221
National Institute of Child Health and Human Development (NICHD)	223
National Institute for Neurological Diseases and Stroke (NINDS)	225
National Eye Institute (NEI)	226
National Institute of Dental Research (NIDR)	226

National Heart and Lung Institute (NHLI)	226
National Institute of Allergy and Infectious Diseases (NIAID)	227
National Institute of Arthritis, Metabolic and Digestive Diseases (NIAMDD)	227
National Institute of General Medical Sciences (NIGMS)	228
 10. MENTAL HEALTH AND MENTAL RETARDATION PROGRAMS FOR HANDICAPPED YOUTH	229
Overview and Summary	229
Roles and Goals	232
Programs for Mentally Retarded, Emotionally Disturbed, and Mentally Ill Children	234
Problems Cited by Mental Health Administrators	263
 Part 3. NEXT STEPS IN THE RESEARCH	
 11. FUTURE ANALYSIS	267
Policy Issues and Options: Research Approach	267
Criteria: Measuring Performance	269
 Appendix	
A. PREVALENCE ESTIMATES AND DEFINITIONS OF HANDICAPPING CONDITIONS	273
B. SURVEY OF STATE AGENCIES SERVING HANDICAPPED YOUTH	283
C. STATE AGENCIES SURVEYED ON PROGRAMS FOR HANDICAPPED YOUTH	285
D. STATE SURVEY QUESTIONNAIRES	312
E. INTERVIEW SURVEY OF PARENTS OF HANDICAPPED YOUTH	326
 SELECTED BIBLIOGRAPHY	331

GLOSSARY

AB	Aid to the Blind
ADA	Average Daily Attendance
ADM	Average Daily Membership
AFDC	Aid to Families with Dependent Children
APTD	Aid to the Permanently and Totally Disabled
BEH	Bureau of Education for the Handicapped
CCS	Crippled Children's Service
CMHC	Community Mental Health Centers
C&Y	Children and Youth
DHEW	Department of Health, Education and Welfare
EHA	Education of the Handicapped Act
ESEA	Elementary and Secondary Education Act
GA	General Assistance
HSMHA	Health Services and Mental Health Administration
ITEB	Income Tax Exemption for the Blind
MCHS	Maternal and Child Health Service
M&I	Maternal and Infant Care
NEI	National Eye Institute
NHLI	National Heart and Lung Institute
NIAID	National Institute of Allergy and Infectious Diseases
NIAMDD	National Institute of Arthritis, Metabolic, and Digestive Diseases
NICHD	National Institute for Child Health and Human Development
NIDR	National Institute of Dental Research
NIGMS	National Institute of General Medical Sciences
NIH	National Institutes of Health
NINDS	National Institute for Neurological Diseases and Stroke
OAA	Old Age Assistance
OASDHI	Old Age, Survivors, Disability, and Health Insurance
SRS	Social and Rehabilitation Service
SSA	Social Security Administration
SSDI	Social Security Disability Insurance
VE	Vocational Education
VR	Vocational Rehabilitation

PART 1

SERVING HANDICAPPED YOUTH: A "CRISIS OF CONTROL"

This part of the report presents an overview of current service policies, programs, and their problems, along with a discussion of the issue of goals and performance, and a way to map the system serving handicapped youth. Many problems identified in this system are also the problems of the entire human service sector of our society. In the words of a former Secretary of DHEW:

There is, in my opinion, a developing crisis—still largely hidden—facing the human service sector of our society, a crisis which may challenge the fundamental capability of our society to govern itself.

It is a crisis of performance—our institutions are failing to live up to our expectations.

It is a crisis of control—in many fundamental respects the human service system is developing beyond the scope of Executive control . . . or of Congressional control . . . or of consumer control . . . or of public control.

— Elliott L. Richardson, "Responsibility and Responsiveness (II)," *A Report on the HEW Potential for the Seventies*, U.S. Department of Health, Education and Welfare, January 18, 1973.

1. INTRODUCTION

This is the first of two reports on the findings of The Rand Corporation's comprehensive cross-agency evaluation of Federal and state programs for assistance to handicapped youth.

Handicapped youth, as defined here, include those from 0 to 21 years of age who are physically or mentally impaired to the degree that they need services not required by "normal" youth. This includes people who are generally called visually or auditorially impaired, speech impaired, crippled or other health impaired, mentally retarded, emotionally disturbed, or learning disabled. Excluded are those whose problems are more attributable to conditions in society than to a physical or mental disability, e.g., the "disadvantaged" youth.

Estimates of the number of handicapped youth vary widely depending on the definitions used, the data believed, and the type of service needed. Definitions of handicaps are not consistent among service agencies. The handicap, if defined at all, is almost never clearly stated and, hence, reliable data on the prevalence of handicapping conditions in youth generally are not available.

The proportions of the problem are clearly indicated if one considers that of the 83.8 million youth aged 0 to 21 in the United States in 1970 more than 9 million were handicapped. While we are not fully satisfied with the reliability of the estimates presented in Table 1.1., we believe that they do represent the correct order of magnitude regarding individuals who require at least some special services. Appendix A discusses these and other estimates and definitions.

SCOPE OF THE RESEARCH

This report focuses on existing Federal and state programs providing services to all types of mentally or physically handicapped youth, giving a descriptive overview of those programs and many of their problems and covering the following subject matter:

Table 1.1

ESTIMATED NUMBER OF HANDICAPPED YOUTH AGED 0-21 IN 1970

Type of Handicap	Number of Youth	
Visual impairment		193,000
Partially sighted	180,000	
Legally blind ^a	45,000	
Hearing impairment		490,000
Hard of hearing	440,000	
Deaf	50,000	
Speech impairment		2,200,000
Crippling or other health impairment ...		1,676,000
Mental retardation		2,800,000
Emotional disturbance		1,500,000
Learning disability		740,000
Multihandicapped		50,000
Total		9,550,000

^aIncluding 32,000 partially sighted.

- The handicapped youth population.
- The services considered include the following: prevention of the handicapping condition, identification of the handicap, direction to appropriate service providers, counseling, medical treatment, education, special training (e.g., mobility or speech), vocational training, job placement, sensory aids and other equipment, recreation and social activity, personal care, income maintenance, training of personnel to supply the services, construction of service facilities, and research.
- The programs comprising the current service system being evaluated are all those through which Federal and state governments contribute to the provision of the above services to handicapped youth.
- The information to be provided, within the limitations of available data, includes the institutional structure, functional service delivery mechanisms, clientele, resources devoted to various classes of handicapped youth, and related problems.

The second report on alternative future Federal policies to improve the delivery of services to handicapped youth provides the following information:

- The target population will be limited to auditorially and/or visually handicapped youth.¹
- The services considered will remain the same as above, but the study will be expanded to include local and private programs, as well as those of the Federal and state governments.

¹ Auditorially and visually handicapped youth were singled out at HEW's request because their handicaps are more readily identified and classified than others; their handicaps can severely affect every aspect of their lives; a wide range of services and programs of varying effectiveness have been developed to serve them; the data appear more readily available for these handicaps than for some others; and the assessment of program objectives, effectiveness, and benefits may be more easily assessed than those for other handicapping conditions such as emotional disturbance.

- The alternative future policies to be analyzed are those that the Federal Government might adopt to help alleviate problems, to improve the services delivered to sensorially handicapped youth, and to improve the institutional structure and functioning of the service system.

RESEARCH APPROACH

We have chosen a research approach that is *comprehensive*, *policy-oriented*, *problem-centered*, and *interdisciplinary*, and in doing so certain strengths and limitations of the effort naturally follow.

In being *comprehensive*, we view the whole system serving handicapped children and youth and are able to better assess the interrelationships of the system's constituent parts to its whole. Such a view is not commonly taken by any identifiable government unit, and this is basically why Rand was asked to undertake this research. Because of the conscious choice to be comprehensive, we may very well err in reporting or failing to report some important details about the nature and operations of the individual parts of the system. We are aware of the problem and have worked diligently to minimize it.

In being *policy-oriented*, we identify three basic client groups for this work: various governmental agencies, the populations served, and the public in general. These groups are mirrored in our concern, respectively, with the whole system view and the relationships of its various parts to the whole; with detail on the individual level obtained through interviews and a family survey; and with the general public through the structuring of the analytic questions in our subsequent report—especially as they concern economic efficiency criteria. A policy orientation does present problems. Almost invariably a policymaker works with sparse information, and existing data almost never exactly answer his specific questions. Data are in inappropriate formats, are unavailable, are unreliable, are not easily analyzed with conventional data processing techniques, and so forth. We explicitly discuss the problems created by data deficiencies, however; e.g., assumptions, limitations, and the extent of data quality and reliability are spelled out—and we treat these problems as carefully as possible.

In being *problem-centered*, we try to identify the actual operational problems in a given system context, both those reported by system participants and those which individuals—because of parochial interests, limited perspectives, or both—are unaware of. We have responded to the former demand by interviewing, surveying, and otherwise attempting to elicit individual points of view, and we have responded to the latter demand by viewing the system according to its programs, services, and participants at levels of resolution ranging from the grossest to the most detailed. In other words, we have looked at the system both from the “top down” and the “bottom up.” In doing so, we have identified problems not commonly known nor widely appreciated, as well as those that are.

The problem-centered approach is beyond the skill and endurance of any one individual and calls for *interdisciplinary* research: the work must be done by a team

having a variety of talents and interests. Our group includes individuals trained in operations research, public administration, political science, business administration, economics, and applied mathematics. Consultative specialists, physicians primarily, have been called upon whenever needed.

Evaluations have often been criticized as mere excuses to maintain the status quo; they have resulted in little or no constructive change, and their existence has often proved to be more mildly diversionary than substantial. We have no particular stake in the status quo, and our general attitude has been to describe events as well as possible and then "let the chips fall where they may." Subsequent, detailed policy analyses are designed to evaluate system performance and effectiveness using a set of multiple criteria for measuring policy outcomes. Defined in terms of the goals of various different service system participants, these criteria include measures of current resource consumption, equity, future economic effects, and effects on the quality of life of the handicapped individual.

These basic types of criteria will be utilized to assess the implications of alternative policies on the service system, the handicapped population, and the public in general. None of these types of criteria is readily identifiable as the exclusive domain of a particular interest group, but all of them reflect real, general concerns about the current capability and future prospects of the system serving handicapped youth. The research approach and evaluation framework we have adopted are generally useful to analyze programs for many different populations, not just those for sensorially handicapped youth.

INFORMATION SOURCES

To provide an overview of the system of government-provided services flowing to handicapped youth, it was necessary to collect and analyze a great deal of information. The service system we found was fragmented, which implied (correctly as it turned out) that information about the system would also be fragmented and that great effort would be required to collect and synthesize the data into a coherent picture.

We collected information from five basic sources: a survey questionnaire mailed to several major service agencies in each state (over 300 agencies in all); interviews with officials in over 60 different Federal and state agencies; Federal and state reports and unpublished data on specific programs; existing literature on the field; and an interview survey of handicapped service recipients.

The *questionnaire to state agencies* was designed to collect information on program costs, the composition of program resources, the services delivered, and the size and character (age, race, income, handicap) of the population served, and on problems of the service system. The response rate was 60 percent; of those not responding, some 33 percent explained why they did not or could not respond, and reasons for non-response have been analyzed and presented in Appendix B. The

questionnaire was mailed to every agency providing a major service program for handicapped youth. Agencies varied from state to state, but typically included departments of education, public health, mental hygiene, mental retardation, welfare, and vocational rehabilitation. Appendix C presents a list of those receiving the questionnaire. Sample copies of the questionnaire are contained in Appendix D.

Interviews were conducted with state and Federal officials who administer programs for the handicapped. In these interviews, we concentrated on gathering background materials on programs and on problems, and on identifying where information gaps existed and might be closed by use of the questionnaire and other means. Interviews with state personnel in Arkansas, California, Illinois, Massachusetts, and Wyoming helped develop and field test the questionnaire and provided more candid appraisals of the system than a mail survey alone would have achieved.

We used numerous *Federal reports and data*, but many are not published. In several cases we could only obtain raw computer data tapes or summary listings from which we did our own tabulations and analyses. In several instances, we tabulated program data from paper records kept in an agency's files.

The literature dealing with all facets of the handicapped is vast. We collected about 1000 titles, only a small fraction of the extant material on the handicapped. But most of the untapped literature is not highly relevant to the type of policy problems that state and Federal officials face, because it is too specialized or too technical to be of much use in the broader planning context of program administration. Especially useful research is described at the end of Secs. 5 through 10, which describe the service agencies. And our bibliography cites many other documents helpful in our work.

The service system description would be incomplete without *information from the consumers* about the quality and quantity of services that they receive. Our second report will document the results of this phase of the research; however, Appendix E discusses the survey design, the questionnaire, and some preliminary illustrative findings.

STRUCTURE OF THIS REPORT

This report is divided into three parts: the first, "Serving Handicapped Youth: A Crisis of Control," summarizes current service policies, programs, and their associated problems (Sec. 2); gives various means of mapping and comprehending the system serving handicapped youth (Sec. 3); and discusses goals and performance issues (Sec. 4). The second part, "Current Service Policy," contains a more detailed overview of each major service program (Secs. 5 through 10). The third part, "Next Steps in the Research" (Sec. 11), briefly discusses the planned program evaluation for the auditorially and visually impaired youth that will comprise our final report.

We have used a three-level structure to present information on the current service system for handicapped youth. The first level is that of the single program, as described in Secs. 5 through 10. The second level overviews all programs in a given

type of agency (e.g., vocational services, education, welfare, health, and mental health and retardation agencies) in the "Summary and Overview" subsections of Secs. 5 through 10. Finally, the third level combines all government programs and agencies; Sec. 2 presents an overview from this level.

2. PROGRAMS, SERVICES, AND PROBLEMS OF THE PRESENT SERVICE SYSTEM

INTRODUCTION

Before describing the programs, services, and problems of the present system serving handicapped youth, this section briefly characterizes discernible institutional roles for the Federal Government in terms of four models. These are the most generalized part of an intellectual "map," described fully in Sec. 3, that also defines the service system in terms of functional mechanisms, rationales, policy processes, and objectives.

The basic models have several dimensions: operations, policy and program control, dollars, and innovation/stimulation. While we do not claim that a given operating institution conforms exactly to any one model, describing the pure model types helps to locate specific governmental institutions within the context of the larger system.

Model I: Direct Operations

If a single institution (or collection of institutions all related to the same service area) is the primary locus for direct service delivery, policy and program control, dollar support, and new developments, then that one institution is playing a comprehensive role termed "Direct Operations," since it is the direct service delivery that distinguishes this model from the other three.

Model II: Controllership

This model is the same as the Direct Operation model except that subordinate agents such as the states and localities deliver the actual services according to carefully prescribed guidelines and subject to authoritative evaluation.

Model III: Special Revenue Sharing, Plus

This model type provides funds and may support innovation or research, but very little concern is evidenced for program control or direct service provision. The "Plus" represents the concept that the Federal Government has some right and

obligation to evaluate the performance of agencies receiving special revenue sharing funds, yet may also engage in innovation related activities.

Model IV: Catalytic

Research, development, demonstration, social experiments, and seed funding all characterize the "Catalytic" model, whereas direct service provision, service funding, and service policy control do not.

THE PROGRAM VIEWPOINT

This report describes over 50 different major identifiable Federal programs¹ providing services to handicapped youth. Most are within the Department of Health, Education and Welfare, but agencies as dissimilar as the Library of Congress and the Department of Defense also have such programs. Many programs are not discussed here because they involve low expenditures, affect few handicapped youth, or deliver the same volume and type of service whether or not the child is handicapped. The selection of the proper set of programs to include depends upon the policy decision addressed. Since this study does not focus on a single policy question, we include programs that are now, or seem likely to be, strongly relevant to policy alternatives for assisting handicapped youth. For ease of presentation, we chose to group the programs into areas by the five different types of agencies that administer them: vocational rehabilitation, education, welfare, health, and mental health and retardation.

Figures 2.1 and 2.2 show, by type of agency, the estimated total annual government expenditures of \$4.7 billion for services to handicapped youth. Amounts shown are all for a single fiscal year, 1970, 1971, or 1972, depending on the data available. Note that special education agency programs alone account for more than half of the expenditures, followed by mental health and retardation, and welfare agency programs. The Federal expenditures of an estimated \$1.1 billion annually comprise only about \$1 from Federal sources for every \$3 from non-Federal sources; however, Federal financial involvement in each program area varies considerably. The largest program area for Federal funds is special education, followed by welfare and health. Also note that non-Federal funding predominates in education, and mental health and retardation, whereas Federal funding predominates for health and vocational services. Welfare is about evenly divided between Federal and non-Federal funding.

Figure 2.3 shows the distribution of funds among handicapping conditions. The mentally retarded are receiving over \$2 billion annually, which is by far the largest share (43 percent) going to any handicapped group. Much of this money is spent on special education (\$1.2 billion) and residential institutions (\$0.5 billion).

The emotionally disturbed receive the next largest share with 17 percent of all expenditures. The other handicaps (vision, hearing, speech impairments, crippling

¹ We use the term program in a generic sense to describe a set of interrelated activities with some common unifying concept such as delivery of a common service (e.g., a rubella vaccination program); administration by a separate bureaucratic entity (e.g., the Vocational Rehabilitation program); or possession of a common goal (e.g., a research program for preventing birth defects).

Fig. 2.1—Government expenditures for handicapped youth

and other health impairments, and learning disabilities) each receive less than 13 percent of the total.

Total budgets, however, do not give much insight into the services flowing to each handicapped person. One way of examining per capita costs is to look at the average annual cost per handicapped youth aged 0 to 21 in the United States. As estimated earlier, this population is approximately 9.55 million, and hence the average annual government expenditure per handicapped youth is \$495. This does not mean that each person receives \$495 worth of government service annually. Some obviously receive much more and many receive nothing. Figure 2.4 shows the distribution of this average cost among service agencies by type of handicap.

Note that the expenditures per visually handicapped youth, at \$793 annually, are higher than for any other handicap, and are followed closely by the expenditures per mentally retarded youth, at \$726 annually. Expenditures per speech impaired youth are lowest, at \$247 annually. On a per capita basis, no one type of handicap dominates expenditures, as the mentally retarded appear to do if one considers only the total expenditures without considering the relative size of the various segments of the handicapped population. Also note that the expenditures in Fig. 2.4 are per handicapped youth, not per handicapped youth *served*. Funds expended per handicapped youth served are considerably higher, as described below.

Fig. 2.2—Percentage of government expenditures for handicapped youth by type of agency

Special Education

Of the \$2.679 billion spent annually on special educational services for handicapped youth, 88 percent is non-Federal funding and the bulk is spent in support of special education classes in regular schools and in residential schools for the more severely impaired. An estimated 3,046,000 handicapped youth were assisted in 1971, or about 7 percent of the public school enrollment. Thus, annual expenditures per youth served averaged \$879, but varied from \$188 for a speech-impaired youth up to \$2900 for a deaf youngster. The three major types of Federal programs were

Fig. 2.3—Government expenditures by type of handicapped youth and type of agency

1. Programs for instructing students (78 percent of Federal special education expenditures), such as the Education of the Handicapped Act (EHA), part B; Elementary and Secondary Education Act (ESEA), Titles I and III; Head Start; the Vocational Education Act; the Higher Education Act; the federally funded schools for the deaf (Gallaudet College, the National Technical Institute for the Deaf, Kendall, and the Model Secondary Schools); and programs targeted at the Deaf-Blind, for early education, and youth with learning disabilities.
2. Programs designed to produce teachers and instructional materials (18 percent of Federal expenditures) such as EHA, parts C, D, and F; the Education Professions Development program; the American Printing House for the Blind; and the Library of Congress program.
3. Programs sponsoring research (4 percent of Federal expenditures) such as EHA, part E.

Fig. 2.4—Government expenditures per handicapped youth by handicap and type of agency

When a program also serves clientele who are not mentally or physically handicapped or not youth, then only the relevant portion of its budget is included in our totals. Almost half of the Federal funds went toward stimulating and diffusing services in the states via the functional mechanisms of services purchased through state and local agencies, and of investments made in ways of providing services. The U.S. Bureau of Education for the Handicapped (BEH) manages only about half of the Federal special education funds we identified. The courts in some states are also becoming more active via mandates concerning the "right to education" for the handicapped. The Federal role vis-à-vis the states is not a dominant one, but appears to be a hybrid and changing one which is now primarily our Catalytic model.

Mental Health and Retardation

This program area ranks second with \$898 million or 17 percent of the total expenditures. The Federal share of the total is about 8 percent. This excludes amounts for the mentally handicapped that are not channeled through mental health and retardation agencies, because such expenditures are included in the totals for those other program areas. The total expenditures for all government agencies on mentally handicapped youth are estimated to be \$2.8 billion annually. A breakdown of the funds channeled through mental health and retardation agencies indicates that more than half is spent on residential care of the mentally retarded, even though only 1 in 25 of the retarded youth receive this type of care. Residential care for the mentally ill accounts for another 30 percent. Approximately a quarter million mentally handicapped youth were treated as inpatients in 1970, at an average cost of approximately \$2960. Funds are also spent on outpatient care, and the expenditures for 570,000 mentally ill young persons who were treated as outpatients averaged about \$150. Of Federal programs, the two largest were the Developmental Disabilities program, primarily serving retarded persons, and the National Institute of Mental Health's Community Mental Health Center program. Federal programs also include research, training, hospital improvements, grants, and the operation of St. Elizabeths Hospital. Another significant Federal activity is that of the President's and Secretary's Committees on Mental Retardation. Literally all of our characteristic role models exist in some Federal mental health or retardation program, but none is developed sufficiently well that it predominates.

Welfare

The third largest category of program expenditures for the handicapped is welfare—13.4 percent, or \$635 million. The total Federal, state, and local shares were 54.6, 34.6, and 10.8 percent respectively. The five primary programs serving about one million youth annually are Social Security Disability Insurance (SSDI); Supplemental Security Income (SSI) providing aid to the aged, blind, and disabled; Aid to Families with Dependent Children (AFDC); General Assistance (GA); and Income Tax Exemption for the Blind (ITEB). The average yearly expenditure per youth served is about \$635. Most of this assistance is provided through AFDC because the family is poor and not because a child is handicapped (although having a handicapped child could be a factor contributing to that poverty). The Federal Government uses two primary functional mechanisms in this program area: Direct provision of services in the SSDI and SSI programs, and purchase of services through state and local agencies in the large AFDC program. As the Federal Government expands its welfare role, it is clearly trending toward our Direct Operations model.

Health

Physical health services consume \$315 million or 6.7 percent of the total amount expended by governments on handicapped youth. The Federal Government provides 65 percent of that total. Most of this money pays for health care for about one million poor and medically needy handicapped youth under the Medicaid pro-

gram, at an average annual per capita cost of approximately \$250. The federally supported Crippled Children's Service served 485,000 medically indigent youth in 1971 at an average per capita cost of about \$180. Note then that while these two major health programs serve handicapped youth, they are distinctly oriented toward the poor. Other federally supported programs were for research (the National Institutes of Health primarily), for prevention (e.g., the rubella immunization program), and for other services (e.g., the Maternal and Child Health Care Clinics, and the vision and hearing screening program). In addition to HEW, we found health care programs for handicapped youth in agencies such as the Veterans Administration and the Department of Defense.

The Medicaid program is an example of our Controllershship model; the Maternal and Child Health program is best described as our Special Revenue Sharing, Plus model, but without the Plus; the Crippled Children's Service program is also a form of Special Revenue Sharing, but the evaluative and quality control Plus is moderately well developed; and the general National Institutes of Health program of research, demonstration, and dissemination of information is an example of the Catalytic role model.

Vocational Services

The smallest component of total expenditures (4.3 percent) is for vocational services, with an annual cost of \$202 million. The Vocational Rehabilitation program provided a comprehensive set of services through state agencies for 101,000 handicapped youth whose cases were closed in 1970 for about \$1300 apiece. Seventy-seven percent of the young clients accepted for service were rehabilitated. Another major federally supported program is the State Employment Service, which spent an estimated total of \$3,750,000 on handicapped youth in 1972. The Presidential Committee on Employment of the Handicapped and the affiliated state and local committees also work to promote employment of the handicapped. Relatively few funds are expended on service personnel training and facilities construction. The Federal role in vocational service expenditures is most nearly our Controllershship model.

THE SERVICE VIEWPOINT

To this point we have focused on individual agencies serving handicapped youth. Focusing solely on agency activity, however, does not yield a complete picture of the overall service system. Viewed from the perspective of services rather than agencies, we see a rich mosaic composed of the following features, each of which is described below: (1) prevention, (2) identification, (3) direction, (4) counseling, (5) medical treatment, (6) education, (7) special training, (8) vocational training, (9) job placement, (10) sensory aids/other equipment, (11) personal care, (12) recreation/social activity, (13) income maintenance and, indirectly, (14) service personnel training, (15) facilities construction, and (16) research. Our research indicates that the extent and efficacy of this system vary among specific handicaps, and discussions of these variances occur throughout the report. Our present purpose is to lay out the

entire system generally with respect to the different services. Describing the system in terms of the needs of the handicapped helps pinpoint gaps in service coverage.

Service types comprising the major and minor components of Federal and state agency programs for handicapped youth are shown in Table 2.1. While specialization is evident, all agencies to some degree provide a wide spectrum of services. Often, providing these services is not a formal, organized part of an agency's program, but occurs naturally or out of necessity, as with the case of counseling.

Nine of the enumerated services are *not* the major responsibility of any one agency. Presuming that these services are important in the lives of handicapped people, this lack of direct responsibility may make getting one of those services (e.g., a sensory aid) a difficult undertaking. Such "unassigned" services also appear to be generally underdeveloped and undersupplied.

Observing and concluding from Table 2.1 that major responsibilities are unduplicated across agencies is misleading because there are overlaps and some duplication of responsibility among different programs *within* the same generic type of agency, as we point out later.

To understand the services better, let us review each briefly.

Table 2.1
SERVICE COMPONENTS OF FEDERAL AND STATE AGENCY PROGRAMS
FOR HANDICAPPED YOUTH

Type of Service	Type of Federal and State Agency				
	Health	Welfare	Special Education	Vocational Services	Mental Health and Retardation
Prevention	m	-	m	-	-
Identification	m	-	m	-	-
Direction	-	m	-	-	-
Counseling/psychiatric care	m	m	m	M	M
Medical/surgical treatment	M	m	-	m	m
Education	-	-	M	-	-
Special training	-	-	m	m	-
Vocational training	-	-	m	M	-
Job placement	-	-	-	M	-
Sensory aids/other equipment	m	m	m	m	-
Recreation/social activity	-	-	m	-	-
Personal care	m	-	m	-	M
Income maintenance	-	M	-	-	-
Personnel training	m	m	m	m	m
Construction of facilities	m	-	m	m	m
Research	m	-	m	m	m

NOTE: M equals major component; m equals minor component; - equals little involvement.

Prevention

Specific precautionary measures are effective in preventing certain handicapped conditions. Rubella and other immunizations are excellent cases in point. Prevention, however, is a neglected service that no one agency has major responsi-

bility for and that no one adequately provides. The few prevention programs that exist provide, at best, spotty coverage of the population. Of the \$4.7 billion all governments spent annually on handicapped youth, we found less than \$50 million targeted specifically for prevention activities.

Identification/Outreach

Three points were made repeatedly in our interviews with agencies and in our investigations of data related to handicapped services: (1) agencies do not serve a significant portion of the population in need; (2) agencies generally do not even know approximately how many unserved people there are, much less who they are; and (3) very few agency outreach programs exist to identify the population in need.

Identification is one of the more neglected services. The prime examples of existing formal identification programs, vision and hearing screening of children, are far from being universal and are virtually nonexistent for preschoolers (early detection is very important in some cases; e.g., the deaf who need early language development assistance). Most identification that does exist is informal, e.g., by schoolteachers or others not specially trained to recognize handicaps.

As important as the service is, particularly early identification, why is it so underdeveloped? One explanation is that all available service resources are being used already, so why go looking for more people? That may be answered in at least three ways: an equity-related answer is that those with the most need or the greatest ability to benefit are not all among those known to the service system; an adequacy-related answer is that if we were to identify more of those in need, the system might eventually respond with a more adequate level of resources; and an information-related answer is that even if the government chooses not to serve a handicapped person, that person might still be identified and armed with information about the exact mix of services he needs—knowledge that is helpful in seeking nongovernmental supported services.

Erroneous identification is also a problem. Cases in point include labeling children as retarded when in fact lack of fluency in English or an auditory handicap is the actual problem.

Direction

This is a critically important but neglected service. The handicapped youth has complex needs, but there is a bewildering maze of agencies, services, and programs, many whose existence he is not even aware of. By direction, we mean the periodic and systematic matching of a youth's needs with the proper mix of services to serve those needs. Individual needs change, for instance, as one ages or improves in response to services; the system's capacity to serve is dynamic too. Direction is an information-based service designed to match individual needs and localized system capabilities as each changes.

In practice, direction has been no one's prime responsibility and hence has become a major gap in the service package offered. Follow-up and redirection, activities implied in the idea of "periodic and systematic" service provision, are particularly underdeveloped. No one really provides this essential service except for isolat-

ed service personnel, dedicated individual pediatricians, teachers, social workers, or counselors, who must make extraordinary efforts to understand other aspects of the system to better advise about services which are not their specialties. Since comprehensive information about the system is not generally available, the quality of any direction service offered will be limited. Our next report will examine the possibility of creating a formal, localized, and comprehensive needs-evaluation and referral program.

Counseling

Professionals in each type of service agency undoubtedly do some counseling of the handicapped youth and his family regarding personal or psychological problems; e.g., counseling on understanding and adapting to the handicap, on interacting with others in society, or on occupational objectives. With the exception of psychiatric care, this service is provided in conjunction with and as a supplement to other services. Given the state of existing data and general information about the overall system, it is impossible to know how much counseling is provided and what its effects are.

Medical Treatment

Most of the \$315 million that health agencies spent in FY 1971 was for treatment and, to a lesser extent, for training personnel and for research. Funds for medical treatment are also a minor component of other agency budgets; e.g., vocational rehabilitation pays for medical care if it advances the program's occupational goal. Over one million handicapped youth from needy families receive this service under provisions of Medicaid, while nearly one-half million youth from medically indigent families benefit under the Crippled Children's Service program. Thus, the health service programs may be characterized as being directed predominantly toward the low-income handicapped.

Education

More than half of the total government expenditures for handicapped youth go toward education, nearly \$2.7 billion in 1971 (mostly non-Federal) for assistance to over 3,000,000 youth. The trend in service has been from serving a few, mainly in residential schools, toward serving many with a system providing a variety of kinds of special education: special day classes, itinerant special education teachers, and resource rooms to supplement the services provided in a normal classroom. The trend to serve more youth has been spurred by court decisions guaranteeing a "right to education" for all the handicapped. Yet, using BEH estimated incidence rates of handicapping conditions, and assuming all handicapped youth aged 5 to 17 need some special education service, we estimate that only 59 percent are served. Other assumptions lead to estimates as low as 36 percent served. There is extreme variation across the states, with the percent served varying from less than 20 to more than 90 percent (using the same assumptions to estimate the percentages for each state). While special education currently captures much legislative interest, the cost

of providing different kinds of special education is not accurately known, and data on differences in effectiveness of each type are practically nonexistent.

Education agencies expect great versatility from teachers, since they also provide limited amounts of other services, such as screening for handicaps, counseling, training for mobility, activities of daily living, vocational training, and sensory aids.

Special Training

Availability of specialized training varies considerably according to the kind needed. If a handicapped youth needs speech therapy, he can generally receive it from schools. Other types of training needs, such as for mobility or for activities of daily living, are not the major responsibility of any single agency and are not widely available in public programs. Reliable data on the exact extent and amount of expenditures for these kinds of training are not available. Many kinds of special training are relatively inexpensive and, if provided, may significantly affect the handicapped youth's life style.

Vocational Training

Physically and mentally handicapped youth may have a restricted choice of occupations because of their impairment, but also may be vocationally impaired because of discrimination or lack of understanding on the part of potential employers. To counter these vocational handicaps, two programs primarily provide training service: Vocational Education (VE), which served 209,000 handicapped youth in 1970; and Vocational Rehabilitation (VR), which provided more extensive training to about 71,000 of its young clients in that year. While data are not available on the success of the VE program, the VR program successfully rehabilitated 77 percent of its young clients. But there was great variation across states in the number of successfully treated young VR clients per 100,000 of the population aged 14-21. For example, in 1970, the range was from less than 100 to more than 500 per 100,000.

Job Placement

Two primary agencies help the handicapped locate employment—Vocational Rehabilitation and State Employment Services—but the latter offers a much less intensive placement service than does the former. Through activities designed to spread knowledge of the abilities of the handicapped generally to the public and potential employers, the Presidential Committee on Employment of the Handicapped and the corresponding committees in the states and localities promote employment opportunities for the handicapped. In total, about \$10 to \$15 million in government funds is spent annually for job placement of handicapped youth.

Prosthetics, Orthotics, Sensory Aids, and Other Equipment

The provision of equipment to the handicapped comprises this service. Primary examples of such equipment include closed-circuit television for the partially sighted, braces, artificial limbs, hearing aids, guide dogs and canes. About one million

people of all ages were using hearing aids, and a quarter of a million blind persons were using canes. The National Academy of Sciences Committee on Prosthetics Research and Development estimated that in 1970, \$64 million was expended on prosthetics and orthotics for 3.5 million people of all ages who could use them. While we have no reliable data on government expenditures for all devices used by youth, we estimate they are on the order of \$20 to \$30 million per year. Nearly all agencies serving handicapped youth expend some funds on devices, but no agency has major responsibility for perfecting and disseminating these aids. Our investigation suggests that considerable progress has been made in creating new aids, but that many of these are not being developed from the working prototype to the user-engineered, final product stage; mechanisms for getting the equipment to the consumer need improvement.

Recreation/Social Activity

This service, obviously a vital contributor to the quality of life of handicapped youth, is provided as a fringe benefit of the education service, but is not now a government responsibility.

Personal Care

While almost all handicapped youth care for themselves or are cared for by their families, there are four principal exceptions: \$747 million was spent in 1970, primarily by the states, for residential inpatient care of a quarter million mentally handicapped youth; some small fraction of the special education funds went for residential schools; a portion of the health budget went for personal care in hospitals or for visiting health workers; and a small portion of the welfare budget paid for personal care in foster homes.

Income Maintenance

This is one of the largest services in terms of expenditures. In 1970, welfare agencies spent some \$635 million to aid about one million handicapped youth. The Federal contribution to this total was about one-half. Prior to the Social Security Amendments of 1972, most youth given aid were eligible *not* because of their handicap, but because they were part of a family receiving Aid to Families with Dependent Children. The 1972 amendments permit youth from needy families to draw increased aid based on the existence of a handicap under the new combined Supplemental Security Income program providing aid to the aged, blind, and disabled.

Personnel Training, Facilities Construction, and Research

These three services benefit handicapped youth indirectly over the long term by improving the ability of the general system to provide the types of services discussed above. Nearly all research is funded by Federal sources whose total budget in 1972 for research related to handicapped youth, including some funds for research related to the handicapped of all ages, was about \$120 million. The largest component was

health-related research. This figure represents about 8 percent of Federal and 2 percent of all governmental expenditures for handicapped youth. Research programs are composed of many projects that are not generally youth-specific, which in some cases overlap one another considerably, and whose results are only slowly and partially incorporated into the service system.

Approximately \$80 million of the Federal budget went for training of service personnel professions to aid handicapped youth, and a considerably smaller amount went for construction of service facilities. In practical terms, the Federal Government plays a minor part in the direct financing of facilities construction.

PROBLEMS OF THE PRESENT SERVICE SYSTEM

With the nearly \$5 billion expended at all levels of government annually, handicapped youth are receiving many needed services. Humanitarian concerns are clearly evident in the expansion of programs and services in recent years. There is no question that the government programs serving handicapped children and youth have very beneficial effects; however, the system faces major problems.

To ascertain problems, we tapped published material and agency data files, utilized a mail questionnaire soliciting views on problems from every major state agency serving handicapped youth in all 50 states, and interviewed dozens of families having handicapped children. To uncover and better understand problems, we looked at the system from a number of perspectives: those of the Office of the Secretary of Health, Education and Welfare; those of the state and Federal operating agencies; and those of the handicapped person and his family. We also looked at the service system disaggregated by agency, type of service, type of handicap, severity of handicap, age of the youth, geographic location, program, objectives, roles the Federal Government plays, and the functional mechanism used to implement the Federal program. Each view and disaggregation adds a different and important perspective to the problems summarized below.

Problems described throughout this report can be grouped into five major classes, each of which is described below: (1) inequity, (2) gaps in services, (3) insufficient knowledge, (4) inadequate or deficient control, and (5) insufficiency of resources. Obviously these are not new problems, nor are they unique to this system. But from several different perspectives, they are critical and demand full examination. To begin this task, we compiled most of the available data to document their existence and extent; to complete this task, we will analyze these and other data to determine what might be done to resolve the problems.

Inequity

If one accepts the premise that federally supported services should be distributed fairly to the population in need, then, by any reasonable standard of fairness, a great deal of inequity exists in the service system for handicapped youth. There is marked unevenness in the accessibility to, and the level of, services. Each program area has large and often extreme variation in per capita expenditures and services delivered across states and among handicaps. Eligibility rules vary across agencies.

Within states, the preschool children and rural youth are short-changed by the service system, as are certain classes of urban children.

For example, consider the vocational rehabilitation program: In 1970, the number of youth rehabilitated per 100,000 of the general population aged 14 to 21 ranged from less than 100 per 100,000 in some states to over 500 per 100,000 in other states; and VR program expenditures per youth rehabilitated varied across the states from \$800 to \$4500. Next, consider the special education program area: The estimated portions of the handicapped youth aged 5 to 17 being served vary across the states from less than 20 percent to more than 90 percent, and the portion served varies among the types of handicaps from less than 25 percent of the hard-of-hearing or emotionally disturbed up to more than 75 percent of the speech impaired. Special education expenditures per youth served vary across the states for all handicaps from a minimum of \$168 to a maximum of \$2463. In some programs, there is an apparent tendency to "cream off" and serve the less severely handicapped youth (i.e., those requiring fewer services and having greater potential for success). Vocational rehabilitation and special education are cited as examples, not because they are worse than other programs, but because data are available on these two programs.

Gaps in Services

Certain critical types of services are neglected and underdeveloped, particularly the prevention service, the identification of those needing service, and the direction or referral service. We know, for instance, that in many geographic areas actual gaps exist in available services; however, without a meaningful local direction service there may be gaps in the mix of services actually provided to meet a child's needs, even if a full range of services actually exists. The present institutional emphasis on single types of services sometimes does not meet a handicapped person's total needs. Many services, which are usually the "underdeveloped" ones, are not the prime responsibility of any one agency. Other gaps exist regarding age (e.g., preschool deaf children are not receiving services important for their language development) and type of handicap by state (e.g., eligibility exclusions deny services to some types of children in one state, while in an identical type of program in a neighboring state different exclusions exist). The problem of an inadequate classification system for handicaps, with respect to needed services, also results in gaps or inappropriate services delivered to individuals.

Insufficient Knowledge

Management improvements in most program areas are hampered by lack of reliable data related to the benefits and effectiveness of programs serving handicapped youth. Usually, even if an agency collects management data, they are limited to resource inputs and not to service outputs. (There are, however, occasional notable exceptions—the vocational rehabilitation program is a rare and commendable example.) There is also a problem of low quality or nonexistent planning and evaluation efforts stemming partially from the root problem of poor or nonexistent data. In most programs, methods to obtain high quality data on program effects have not been established. In some programs no one really knows who is doing what for whom or with what effect.

Inadequate Control

The vast system providing services to this nation's handicapped children is varied, fragmented, uncoordinated, and not particularly responsive to an individual's total needs. The sheer number of institutions dispensing funds and services under many enabling legislations contributes to a situation in which no one individual or group of individuals plans, monitors, or controls the handicapped service system in any comprehensive fashion. Policymaking, funding, and operating decisions are often made by entirely different groups of people, based in each case on an almost total lack of data about program effectiveness; and as a result, accountability is generally very weak.

Agencies responsible for a service sometimes do not even have control over the flow of funds for that service; e.g., only about half of the Federal funds for educational services for the handicapped flow through the Bureau of Education for the Handicapped. Interrelations among agencies at the management level are often perfunctory at best, and in some areas responsibilities overlap considerably. For example, the Crippled Children's Service and the Medicaid program both fund medical services for needy handicapped youth, but generally do so without benefit of formal coordination in the states; and, in practical terms, education projects for the handicapped supported under ESEA (Title III) and EHA (part B) may be quite similar but are administered separately. Lack of control at the level of the individual service recipient is evidenced by the neglected and highly underdeveloped direction or referral service for matching the needs of the handicapped person with the appropriate mix of locally available services.

Insufficient Resources

Current resources devoted to services for handicapped youth are clearly insufficient, if service to each person in need is the criterion. Large unmet needs exist; for example, in the special education area less than 60 percent of those in need are served. Inadequate resources (dollars, personnel, and facilities) was the problem most often cited in previous studies and reports, by special commissions, by officials in the agencies we interviewed, and in the responses to our mail survey. Still, resources are not the only problem, and a great deal could be done to improve the services themselves, the mixes of services delivered, and the institutional structure even if the present funding levels are not increased.

3. MAPPING THE SERVICE SYSTEM: MODELS, FUNCTIONS, RATIONALES, AND THE POLICY PROCESS

INTRODUCTION

This section presents the intellectual “map” we devised to locate and describe large pieces of the service system. First, we define coarse-grained, low-resolution *models* of the operational institutions and the respective roles they perform. Next, we describe *functional mechanisms* by which those key institutions help produce services. To provide a sense of why the system functions as it does, we postulate *rationales*, both implicit and explicit, being advanced to justify the selection of broad classes of functional activities constituting policies and programs. And, finally, we lay out key *processes* by which the system appears to operate and change by way of detailing a general sequence of events through which policies and programs are created, implemented, and eventually ended.

MODELS OF FEDERAL INSTITUTIONAL ROLES

At least four separate institutional roles (models) for the Federal Government are discernible in programs, and while we would not claim that a given operating institution conforms exactly to any one of these models, describing the pure model types helps to locate specific governmental institutions within the context of the larger system.

There are essentially four dimensions for defining the basic models: operations, policy and program control, dollars, and innovation/stimulation. Each dimension is a metric indicative of the degree and type of responsibility and authority vested in and exercised by any given institution. The dimensions may be illustrated by posing the following operational questions:

- *Operations:* Is the institution directly providing services? Is it the delivery point for the affected population?
- *Policy and Program Control:* Is the institution mainly responsible for developing and monitoring policies and programs designed to produce specified services? Policy formulation and program evaluation are key examples.

- *Dollars:* Is the institution the primary source of funds supporting a given service or collection of services? Does it have the power to change the amount of those funds?
- *Innovation/Stimulation:* Is the institution primarily responsible for creating new ideas, programs, and policies and for encouraging operational agencies to adopt practices and procedures reflecting these ideas? Research, development, demonstrations, and so-called "social experiments" are all illustrative activities.

Each dimension will become clearer as we characterize our four basic models.

Model I: Direct Operation

If a single institution (or collection of institutions all related to the same service area, e.g., Federal special education programs for the deaf-blind) is the primary locus for dollar support, policy and program formulation and monitoring, service delivery, and new developments, then that one institution or cluster of related institutions is playing a comprehensive role which we term "Direct Operation," because it is the direct service delivery that distinguishes this model from the following ones. The primary idea is that all responsibility and authority are concentrated in one or a few institutional entities. National defense is one such substantive area; the Bureau of Indian Affairs' responsibility for care and support of the Indian population is another; and certain selected aspects of Federal participation in special education and Social Security activities provide yet other, more narrowly focused instances.

Given the size of the country's population, the diversity of its needs, and the complexity of programs that have sprung up to satisfy those needs, there is increasing awareness that universal rules and the Direct Operation *modus operandi* by the Federal Government may do more harm than good in some program areas.

The detailed administrative approach does not work for clear enough reasons—which start with the impossibility of writing detailed rules to fit every case, and end with the lack of highly trained people to administer every case, assuming that an administrative solution is possible.¹

The issue seems to boil down to the simple question, "Is it a good thing for the Federal Government to take on the direct responsibility for a certain service to a subpopulation?" If one is not convinced that the program will run better when Washington runs it, then there is a need to examine alternative structural models.

Model II: Controllership

"Controllership" reduces the extent of operation (direct service provision) but retains the remaining three dimensions. In this model actual service provision is delegated or otherwise turned over to some other institution (i.e., subordinate agencies such as the states and localities), but determinations of what to spend money on, how to spend it, and how to account for it are concentrated in one definable Federal unit, as are the powers to allocate enabling resources and to create and generate new approaches to manage the underlying problems. The Community

¹ R. A. Levine, "Rethinking our Social Strategies," *Public Interest*, Winter 1968, pp. 88-92.

Mental Health Centers (CMHC) program of the National Institute of Mental Health has most characteristics of this model: it is funded primarily with Federal dollars; Washington promulgates its policies and guidelines; innovations and new ideas evolve as a result of a separate provision of the basic Federal legislation; but the states and localities provide the services themselves. Many of the shortcomings, although not all, of the Controllership model are shared by the CMHC as well.

An inherent general problem with the Controllership model is its reliance on centralized financial coercion and its consequent lack of primary responsibility for those actually delivering the services. Often with this model, local officials, who know the most about the clients and their problems, are governed by complex and constricting rules handed down from higher bureaucratic levels. This causes clients who do not conform to the rules or qualify for fixed categories to be shunted from one agency to another; and it often makes it difficult to fix responsibility. Because those who actually deliver the services know they will be "blamed" for inadequate or poor performance, they tend to be unwilling to act in daring or creative ways.² It is a structural model and form of reasoning that has caused many organizations to limit themselves to administrative functions. When a hierarchy such as that implied in the Model II characterization prevails, leaders tend to impose what they consider rational guidelines on their subordinates without adequately considering the experiences of those who must put the policies into practice, a problem that is particularly severe, for example, in mental hospitals, but one that also exists in schools and in welfare systems.

Model III: Special Revenue Sharing, Plus

We use the term "special revenue sharing" in its *de facto* not its *de jure* sense.³ Dimensions concentrated in this model are control over *broad* policy formulation and specific program evaluation and responsibility for innovative and stimulative activities. There is less direct service provision and drastic altering of the resource flow once initial allocations have been made. Broad policy formulation means that some intended recipient populations will be generally identified as likely beneficiaries of services, but more specific guidance than this will not be imposed; i.e., there will be no copious guidelines, no detailed programs, and minimal detailed concern for how resources actually are expended. The implicit idea is analogous to the private sector practice of leaving operational responsibility to a plant manager whose performance is then periodically assessed relative to other plant managers and to some absolute norm such as a profit and loss statement. The obvious difficulties involved in measuring public sector goods and services and the absence of any social balance sheet are not to be underestimated.⁴

² V. A. Thompson, *Modern Organizations*, Alfred A. Knopf, New York, 1965, pp. 129-137.

³ While initiatives to institute special revenue sharing in the educational, health, and social service areas are all awaiting formal adoption, *in fact* a number of identifiable programs already exist that share characteristics which could best be described as revenue sharing. How these programs have fared may provide a valuable preview of how the larger proposed programs may eventually develop and fare as well.

⁴ Worth Bateman, "Assessing Program Effectiveness," *Welfare in Review*, Vol. 6, January/February 1968, pp. 1-10; Peter Rossi, "Practice, Method, and Theory in Evaluating Social Action Programs," in J. L. Sundquist (ed.), *On Fighting Poverty: Perspectives from Experience*, Basic Books, New York, 1969, pp. 217-234; Jerome Rothenberg, *The Measurement of Social Welfare*, Prentice Hall, Englewood Cliffs, New Jersey, 1961; and J. S. Wholey et al., *Federal Evaluation Policy: Analyzing the Effects of Public Programs*, The Brookings Institution, Washington, D.C., 1970.

We know that the Federal Government is able to collect taxes and to disburse funds efficiently; but some people are learning that it is less able to run large, detailed programs, or at least it does this far less effectively than taxing and disbursing. What this implies is an evolving trend to increased reliance on revenue sharing types of operations; however, it also implies that there are significant unrealized needs to account for performance.

The "Plus" in the Model III label elaborates the concept of "minimal Federal concern" by developing the notion that the Federal Government has some right and obligation to evaluate the performance of service-providing agencies to whom it supplies special revenue sharing. Where are the significantly effective and ineffective programs, and what might be done to disseminate the former and to discourage the latter? The underlying idea is to improve performance by rewarding those who are in fact "doing a good job," while not specifying in advance the mechanisms by which the job is to be done. When a "good job" is discovered, the reasons explaining why it is so are then liable to be scrutinized and perhaps implemented in other related areas where performance has not been as exemplary.⁵

To counter prevalent fears that transferred funds will be squandered in poorly conceived and operated state and local programs, the evaluation leverage must not be foregone and indeed must be developed to a considerably greater extent than it is at present. This requirement is primarily an informational one. Nowhere else in the system will there be an opportunity to view the "big" or comprehensive picture that is essential before one attempts to structure broad policies. This point is particularly true for our fourth or "Catalytic" model.

Model IV: Catalytic

Research, development, demonstration, and social experiments are all characteristics of the "Catalytic" model. Together they represent investments in intellectual and technical activities designed to improve services and productivity, thereby making scarce dollars go farther or be more effective; to improve operating systems, thereby insuring that services are delivered as efficiently as possible; and to improve the amount and quality of technical assistance available to those in the field, thereby improving the flow of newly created knowledge into the operating environment. The Catalytic model's medium of currency is information rather than money. If successfully carried out, its primary objective insures leadership based on the best knowledge about the system, its problems, and its possibilities. In operational terms, it aids in setting up program objectives and structure, rather than running the programs; it aids in selecting priorities based on solid analyses, rather than throwing money at problems; and it aids in controlling large, complex, and hard-to-understand systems, rather than observing them as they plunge along out of control.

While the total Department of Health, Education and Welfare budget is abso-

⁵ This is not to say that special revenue sharing is a panacea, as evidenced in current second thoughts that many state officials are having about the education aspect of it. See Karen De Witt, "Education Report/Handicapped Schoolchildren Enmeshed in Debate on Federal Role in Education," *National Journal*, February 10, 1973, pp. 199-205. The fundamental issue seems to be whether the amounts forthcoming from educational special revenue sharing will be adequate to meet the states' needs, particularly in light of recent court decisions interpreting the Constitution's 14th Amendment to include the right to an education for all handicapped children. The second thoughts are not about the structural concept of revenue sharing, per se, which has received many favorable initial reactions.

lutely quite large, there is in fact very little discretionary or "controllable" latitude in it. Cash transfer programs, such as Medicaid and the payment of Social Security benefits, are essentially open-ended; i.e., the dollar outflow cannot be reduced short of redefining eligible populations or, in the case of Medicaid, narrowing the range of coverage.⁶ Because discretionary funds are limited, there is consequently a rather severe problem of allocating scarce resources and a need to create alternative bases to maintain power. In this case the new base is information. It is in part because of these demands that we observe considerable interest in the development of the Catalytic model on the part of certain Department of Health, Education and Welfare officials.⁷

In his thoughtful discourse, *The Step to Man*, John Rader Platt has struck the key conceptual features of the Catalytic model in terms of organizations yet to be developed and functions yet to be performed.⁸

But we have no . . . organizations that spend all of their time searching deliberately for new inventions and combinations for the solution of social problems. There is no General Electric, no national laboratory, with full-time research and development teams assigned to come up with ingenious ideas of improved social organization and communication and interaction. . . . The main reason why our solution of social problems lags so far behind our magnificent technology today may be that we have not yet organized the same deliberate search for ideas to deal with them. . . . Yet "social inventions" are possible, as we have seen, just as possible as technological ones, and might be searched for in the same way.

These abstractions may be illustrated concretely and, by doing so later, the possibilities of the Catalytic model shall become clearer.

As discussed later, mental retardation is a pervasive and expensive handicapping condition in this country. One of the saddest facts about mental retardation is that many cases could be prevented or averted if present knowledge could be applied more widely. Unfortunately, this knowledge has not yet produced much practical "fallout" for the bulk of the present and future mentally retarded population. For example, we know how to recognize the chromosomal flaw that is responsible for mongolism (Down's Syndrome) and several other genetically related causes of retardation; we can, with amniocentesis, diagnose the problem in utero. But this knowledge, and the genetic counseling implied by its application, is not widely recognized and practiced. The Catalytic model would attend to this and many other mismatches of knowledge and practice as a first order of business, turning them to the collective advantage.⁹

To illustrate these structural models we have alluded to some general functional mechanisms that might characterize each, but we have not done so systematically. Let us turn now to that task.

⁶ I. J. Lewis, "Government Investment in Health Care," *Scientific American*, Vol. 224, April 1971.

⁷ The Bureau of Education for the Handicapped has increasingly adopted a "Catalytic" posture in recent years, and its efforts bear careful examination.

⁸ J. R. Platt, *The Step to Man*, John Wiley, New York, 1966, pp. 132-133. Platt, in his capacity in the Mental Health Research Institute at the University of Michigan, has thought hard and well about many of the problems of large, uncontrolled social systems and what might be done about them; this book is a testimony to his constructive concern.

⁹ See Peter Drucker, *The Age of Discontinuity*, Harper and Row, New York, 1969, especially Chapter 10, "The Sickness of Government," for some pertinent comments on this general issue.

FUNCTIONAL MECHANISMS

The models just considered lack specific detail. In concentrating on broad structural characteristics, they provide one with an approximate "sense" of the extraordinarily complex system we are describing. Understandably, embedded in the concept of model type are some basic ideas about the functional mechanisms that are used to produce certain fundamental services. For example, the Direct Operation model, by directly providing services, purchases, demonstrations, and so forth, employs practically every functional mechanism available and sometimes monopolizes the production of specific types of services for selected consumer subsets of the population. To gain more than a summary understanding of the system, one must be willing to go to a more finely resolved map to observe more systematically and in greater detail these functional mechanisms, the services they produce or provide, and the rationales generally used to justify both mechanisms and services. The key point is that the models of Federal roles represent only a coarse, general approximation of the system's actual detail and complexity. Better understanding demands finer resolution.

The general functional mechanisms with which Federal institutions in this system help produce a range of definable services or products include (1) the direct provision of services, (2) the purchase of services through state or local government institutions, (3) the regulation of those providing services, (4) the investment in manpower and facilities that in time contributes to an adequate supply of services, and (5) the search for and dissemination of information both about the system, its problems, and its participants and about improved ways to provide services. After discussing the characteristic functions, we shall consider some rationales commonly employed to justify them.

These five mechanisms produce a variety of specific services, as described in Sec. 2, that are the system's "products" as seen primarily from the perspective of the "consumer"—the handicapped child and his family.

Of the five functional mechanisms, the direct provision of services, and the purchase of services through state and local government institutions, are plainly dominant in terms of dollars expended on them, their impact on the affected population, or any other suitable measures; however, the importance of the remaining mechanisms is not to be discounted, particularly since several of them appear to be underdeveloped and may represent strategic, exploitable opportunities.

Direct Provision of Services

Prime examples of services provided directly by the Federal Government are the Social Security Disability Insurance program; the new combined Supplemental Security Income program providing aid to the aged, blind, and disabled program; Gallaudet College; the Kendall and Model Secondary Schools for the Deaf; the National Technical Institute for the Deaf; St. Elizabeths Hospital; and the Indian Health Program. In each of these an agency of the Federal Government, rather than an agency of state or local government, provides services directly.

Purchase of Services

Prevention, medical treatment, vocational training, job placement, and identification are examples of services purchased with Federal dollars through state and local agencies that provide the services directly. In most cases Federal funds are matched by state or local funds according to formulas accounting for demographic and income differentials between states and locales. Immunization is a clear example of the prevention service, and mass screening for a variety of handicapping disorders illustrates the identification service. An example that does not depend exclusively on Federal dollars for medical treatment is the Crippled Children's Service program. Vocational preparation and job placement are given in assorted Vocational Rehabilitation and State Employment Service programs with Federal funds. As noted previously, the Department of Health, Education and Welfare, except for a relatively few discretionary dollars, has little or no control over the spending of its budget. Generally it is the scarcer discretionary funds that flow through the purchase of service programs cited above.

Another example of service purchase, in this case primarily the income maintenance service, is the Aid to Families with Dependent Children program which relies heavily on Federal funds but is operated through state and local agencies. This is part of the larger "uncontrollable" segment of the Health, Education and Welfare budget and hence has profound consequences for the orderly and effective operation of the overall system.

An important point with respect to income maintenance in general is that it provides an indirect means for the government to purchase other types of services, with the discretion of what other services are purchased for the handicapped youth left to the recipient of the income maintenance funds. In actuality, income maintenance is an intermediate or instrumental service that is subsequently convertible into medical treatment, personal care, recreation, and any number of other ultimately consumable services. However, this mechanism has inherent serious system deficiencies. Questions such as, "How many of what kinds of services does the population actually use?" and "What do those services really cost?" have been rendered virtually unanswerable because of the method by which income maintenance is delivered.¹⁰ Also, given the poor quality of publicly available information on who supplies what services at what cost, with what benefit, how can a handicapped youth's family intelligently decide what services to purchase? Income maintenance is a notably large example of a service *not* provided by agencies primarily concerned with handicapped children. Therefore eventual demand for specific, handicap-related services is known less well than it could be; consequently, control over the supply of those services diminishes.

Regulation of Those Providing Services

Regulation involves three conceptually different but related clusters of mechanisms, which depend heavily on the collection and analyses of information about

¹⁰ When, for example, we discuss "Title XIX children" (Sec. 8), the operational result of the functional problem manifests itself in terms of not knowing (1) how many recipients are handicapped, (2) what the handicapping conditions are for those who are afflicted, (3) what the total amount and cost of all services received are, and (4) generally, how well the services received are "doing the job." Program planning and operational control under such a situation are extremely difficult. Thus this problem is not unique to income maintenance.

the system: licensing, certifying, and auditing may be considered as one such cluster; program coordination activities, through all levels of government, may be taken as another; and rulings by the courts as still another.

Licensing, Certification, and Auditing. The licensing of individuals and facilities who provide services is a prime direct means by which governments insure the delivery of products with minimal standard quality. Contributing to the overall effectiveness of service are state and local licensing of special schools and homes used by children in the special education and personal care services; Food and Drug Administration licensing of drugs used in the medical treatment service; and local and national peer review boards that license and certify individuals who provide specialized training and education services.

Certification is ordinarily carried out on behalf of the government by tested and qualified members of professional skill groups, e.g., medical certification boards, education certifying bodies, and so forth. For example, the National Bureau of Standards has recently expanded its activities into the area of sensory aids and some prosthetics, assessing and implicitly certifying the quality, utility, and general "worth" of most commercially available hearing aids.

Auditing, taken narrowly to mean fiscal accountability, is ordinarily done by private firms and individuals who have at some prior time been "certified" to carry out this responsibility. It is also done on a larger scale and with a broader intent by representatives of the U.S. General Accounting Office, and personnel within Federal departments.

Licensing, certifying, and auditing, taken together, represent a "high-leverage," low-cost functional mechanism for influencing the system serving handicapped children and youth.

Program Coordination Activities. Such is not the case, however, for program coordination activities, and data and information management deficiencies are at the root of the problem. Poorly coordinated or uncoordinated service provision is a common theme running throughout this report on the system serving handicapped children and youth. The problem is chronic and stems from program fragmentation and from the lack of information (about all services, programs, and activities affecting the lives of the handicapped) organized in comparable accounting formats to allow comparisons at various levels of comprehensiveness and aggregation. One operational implication of this functional deficiency is captured by Michael Marge:¹¹

But when such information is not available, it is hoped we will be forgiven when we turn, as did the soothsayers of old, to our crystal ball to foretell the future.

The problem is recognized and potential solutions have been offered;¹² but the problem persists, has not been satisfactorily resolved and, as a result, the effectiveness of delivery for a number of our identified services is diminished.

¹¹ When the article was written from which this citation is taken, Michael Marge was the Director, Program Planning and Evaluation, Bureau of Education for the Handicapped, U.S. Office of Education. Michael Marge, "Planning and Evaluation for the Future," *Exceptional Children*, Vol. 34, March 1968, pp. 505-508, quote at p. 508.

¹² Among these solutions, PPBS (Program Planning and Budgeting Systems), Program Planning and Evaluation, and Management Information Systems often play a major role. See, for example, David Novick (ed.), *Program Budgeting*, Harvard University Press, Cambridge, Massachusetts, 1965; and F. J.

Court Rulings. Court rulings can also have great significance vis-à-vis the operation of programs for handicapped youth. For example, recent court rulings in Pennsylvania and other states have been aimed at guaranteeing each handicapped youth the right to an education.

Investment in Manpower and Facilities

Investment contributes generally to the supply of services, such as those identified, in terms of increasing the available stock of qualified humans¹³ and suitable facilities.¹⁴ Accounting for the impacts of these investments is hard enough,¹⁵ and trying to link the investment function directly with each of our other handicapped youth services is even more challenging. Major service areas in which a more or less direct connection to investment may be made include medical treatment, education, special training, and sensory aids/equipment. In the service area of education, for instance, there is a well developed, empirically based literature that concentrates on that connection.¹⁶ The impacts of investment on other services are not as well researched and known, although this represents one of those underdeveloped and exploitable areas we noted earlier.¹⁷

Research, Development, and the Dissemination of New Information

Another functional mechanism, whose impact on the specified services is hard to assess but which figures prominently as being both underdeveloped and exploitable, is the creation and dissemination of information. This is accomplished through research and development, but also includes the dissemination of information on the delivery of services to those operating direct service programs and to the consumer.

The connections between new knowledge and societal change have been consid-

Lyden and E. G. Miller (eds.), *Planning Programming Budgeting: A Systems Approach to Management*, Markham, Chicago, 1967, especially Part IV, pp. 163-262, for general comments on the first "solution"; Edward Suchman, "A Model for Research and Evaluation on Rehabilitation," in M. B. Sussman (ed.), *Sociology and Rehabilitation*, American Sociological Association, New York, 1966, pp. 52-70; and A. J. Kahn, *Studies in Social Planning and Policy*, Russell Sage Foundation, New York, 1969, for pertinent comments on the second. The area of management information systems has a large literature and the new Medicaid Management Information System and several other less comprehensive, more special purpose systems are embryonic efforts to coordinate activities at the DHEW level.

¹³ G. S. Becker, *Human Capital*, National Bureau of Economic Research, New York, 1964, pp. 94, 117-124, 128 is one standard source.

¹⁴ Robert Dorfman (ed.), *Measuring Benefits of Government Investments*, The Brookings Institution, Washington, D.C., 1965, has a number of directly relevant pieces and is a generally good source of information on this matter.

¹⁵ Bureau of the Budget, *Measuring Productivity of Federal Government Organizations*, 1964, gets at the assessment of investment in the public sector services issue. Political and economic discounting problems abound.

¹⁶ Jerry Miner, *Social and Economic Factors in Spending for Public Education*, Syracuse University Press, Syracuse, New York, 1963; and O. A. Davis, "Empirical Evidence of Political Influence upon the Expenditure Policies of Public Schools," in Julius Margolis (ed.), *The Public Economy of Urban Communities*, Johns Hopkins University Press, Baltimore, 1965, are only two such examples.

¹⁷ What are the operational time lags between periods at which investments in various human and supporting facilities are made and the points of return for each of the services of direct interest to those responsible for handicapped children? How do those time differentials compare with the time frames used by responsible authorities? What are the discount rates? These and a long list of related questions would serve as the basis of any concerted investigations in this area.

ered extensively elsewhere,¹⁸ and mainly involve the development phases of the R&D function¹⁹ and the coordinative aspects of the service regulation function.²⁰ James S. Coleman and several colleagues executed an empirical investigation of information brokerage done in the context of the creation and diffusion of new drugs among medical specialists.²¹

Unmet needs must be sensed, and that primarily concerns the information collection and processing aspect of the research and development and, to a lesser extent, the coordinative aspects of the regulative functions. However, that these functions are underdeveloped and have not worked well in the past is attested to by numerous demonstrations and disturbances carried out by those whose needs are apparently not being met.²²

The research and development mechanism accounts for slightly more than 8 percent of the Federal resources currently expended on handicapped children, and it operates both to create new knowledge, which in turn may improve individual services (either in their supply or their quality),²³ and to learn about the operation of the system, which may lead to improvements in system effectiveness and efficiency.²⁴ Besides activities recognized as research per se, this function includes demonstrations,²⁵ experiments,²⁶ and "seed money" projects (i.e., one-time provision of resources designed to induce continuing support from third parties). Of these, experiments bear closer consideration.

Experiments allow different alternatives to be tested in a relative, realistic setting but at a small fraction of the cost of changing an entire ongoing system.²⁷ Such experiments have great and obvious appeal, but only recently have any signifi-

¹⁸ J. L. Walker, "The Diffusion of Innovations Among the American States," *American Political Science Review*, Vol. 63, No. 3, September 1969, pp. 880-899; and G. D. Brewer, "On Innovation, Social Change and Reality," *Technological Forecasting and Social Change*, Vol. 5, No. 1, 1973.

¹⁹ Elihu Katz et al., "Traditions of Research in the Diffusion of Innovations," *American Sociological Review*, 1963, pp. 237-252; and G. F. Fairweather, *Methods for Experimental Social Innovation*, John Wiley, New York, 1968.

²⁰ Harold Wilensky, *Organizational Intelligence: Knowledge and Policy in Government and Industry*, Basic Books, New York, 1967.

²¹ J. S. Coleman et al., "The Diffusion of an Innovation Among Physicians," *Sociometry*, Vol. 20, December 1957, pp. 253-270.

²² Herbert Kaufman explains this well in his "Administrative Decentralization and Political Power," *Public Administration Review*, Vol. 29, January/February 1969, pp. 3-14. See also J. Q. Wilson, "The Strategy of Protest," *Journal of Conflict Resolution*, Vol. 3, September 1961, pp. 291-303, for a related assessment of the effectiveness with which unmet needs are being sensed and what specific groups of citizens are doing about it.

²³ For example, with respect to the income maintenance service, see L. L. Orr, R. G. Hollister, M. Lefcowitz, and K. Hester (eds.), *Income Maintenance: Interdisciplinary Approaches to Research*, Markham, Chicago, 1971.

²⁴ For the educational service, see C. H. Weiss (ed.), *Evaluation Action Programs*, Allyn and Bacon, Boston, 1972.

²⁵ J. W. Moss, "Research and Demonstrations," *Exceptional Children*, Vol. 34, March 1968, pp. 509-514, outlines the possibilities and the experiences for the special education services as applied directly to handicapped children.

²⁶ The commonly read piece by D. T. Campbell, "Reforms as Experiments," *American Psychologist*, Vol. 24, April 1969, pp. 409-429, provides a good general elaboration of the concept. A specific example of the connection between the R&D functional mechanism "experimentation" and the specific service "vocational training" is H. J. Meyer and E. F. Borgatta, *An Experiment in Mental Patient Rehabilitation*, Russell Sage Foundation, New York, 1959.

²⁷ For a discussion of the relationship between the experimentation mechanism and medical treatment, see W. J. Horvath, "The Systems Approach to the National Health Problem," *Management Science*, Vol. 12, 1966, pp. B391-B395.

cant ones been carried out. Experimentation seems to have a strong "growth" potential within the relatively underdeveloped R&D functional mechanism.

RATIONALES

Rationales—the underlying reasons used to explain and justify the creation and existence of the functional mechanisms and the services they produce—vary widely in number, degree of ambiguity, and means of articulation. These rationales and their characteristic arguments may be simplified into five general types: (1) resource redistribution, (2) economies of scale, (3) internalization of externalities, (4) control and responsiveness, and (5) stimulation.

In short, we are considering questions such as, "What reasons are generally given for providing certain services in a location and not other services?" and "What general rationales are routinely employed to support what kinds of producing mechanisms?"

Redistribution of Resources

Redistributive rationales underlie many specific forms taken by the Federal "purchase of service through state agencies." *Increasing the number and kinds of social goods and services*, such as those provided to handicapped children and youth, is tied by taxing strategies of several sorts to redistributive reasoning.²⁸ Also encountered are appeals to increase the net productivity of human capital by upgrading the working potential of the handicapped segment of the population through direct purchases of services and investments in manpower and facilities.²⁹

Redistributive rationales are intimately related to the functional mechanisms of purchase of services, regulation of service providers, and investment in means of producing services.

Rationales for redistributing resources reflect *equity* concerns in two distinct ways. For individuals, the concept of narrowing income differentials, as between the handicapped and the nonhandicapped, is easily understood and relates again mainly to purchase of service mechanisms. Redress of governmental-institutional service inequities, given variations in wealth among the states and localities, is a common rationalization for formulas in grant programs characteristic of many purchase of service mechanisms; e.g., allowances for "designated poverty areas" are greater than for other areas, and the net effect is redistributive, based on equity considerations.

Public services have long been determined and rationalized in terms of "effective demand," which roughly translates into the visible and pressing demands of

²⁸ R. A. Musgrave, *The Theory of Public Finance*, McGraw-Hill, New York, 1958, Chapter 5, is a standard source detailing this point. For a more thorough technical discussion, see W. I. Gillespie, "Effect of Public Expenditures on the Distribution of Income," in R. A. Musgrave (ed.), *Essays in Fiscal Federalism*, The Brookings Institution, Washington, D.C., 1965.

²⁹ The relevant literature is voluminous but has been summarized in Jacob Mincer, "The Distribution of Labor Incomes: A Survey with Special Reference to the Human Capital Approach," *Journal of Economic Literature*, Vol. 8, March 1970, pp. 1-27.

those who know the service is available. As basically economic rationales have tended to give way to moral ones, however, the idea of unmet need to justify redistributing resources has gained currency. The unmet needs concept may be defined in terms of *sensing* those who are in need and then *accommodating* those individuals, even if they cannot effectively demand service, both by broadening the scope and improving the quality of services provided them. Accommodating unmet needs is an underlying rationale used in many purchases of service arrangements and is basically redistributive in nature. Whereas effective demand was measurable in principle, unmet need is far less so, with the result that assessing performance in satisfying unmet needs is extremely difficult.³⁰

Financial assistance programs are related to the beneficiary's *needs* and *resources*; benefits flow rather automatically once categorical eligibility is established. Depending on who contributes and who receives benefits, income is redistributed. Wondering from whom to whom this income is in fact redistributed, Richard Musgrave has speculated that it is from the middle and lower classes generally to special categories of the lower class.³¹ Whatever the specific effect, financial assistance programs are rationalized primarily on redistributive grounds.

Economies of Scale

The basic idea of scale economies is related to the relative size of units of production, populations, and so forth.³² While many explanations of scale economies have been advanced (including the use of nonhuman resources, the use of standardized parts, the breakdown of complex processes into simpler, repetitive ones, and the specialization of function), for our purposes we are primarily concerned with *specialization* considerations as viewed from two perspectives: those who provide services and those who receive them.

Providing specialized training for teachers of the small population of the deaf-blind is a manpower investment function rationalized by appeal to economy of scale arguments; it is just not as efficient nor as effective to train these few specialists in a variety of programs in every state as it is to bring them together in a very few locations for training. Constructing one or a few specialized state or Federal schools for selected categories of handicapped children could be likewise rationalized; e.g., it is more efficient and effective to have one school staffed by specially trained teachers providing college level education to the severely handicapped deaf than it is to provide facilities for them in every state. Having a few such facilities enhances regulation of service providers as well through mechanisms of licensure, certification, and the coordination of available resources. Critical masses of scarce and specialized research talent and equipment are also often assembled and supported with reference to scale economy arguments.

³⁰ Points made in this discussion have been made well in another context by Heinz Eulau, "Skill Revolution and Consultative Commonwealth," *American Political Science Review*, Vol. 67, No. 1, March 1973, pp. 169-191, at p. 185.

³¹ R. A. Musgrave, *Fiscal Systems*, Yale University Press, New Haven, 1969, pp. 349-350.

³² The literature on the general subject is extensive, but for two well known, representative efforts see, for example, W. Z. Hirsch, "Determination of Public Education Expenditures," *National Tax Journal*, Vol. 13, No. 1, March 1960; and H. E. Brazer, *City Expenditures in the United States*, National Bureau of Economic Research, New York, Occasional Paper #66, 1959.

From the perspective of service recipients, this type of rationalization is often invoked in support of the direct provision of services—for instance, room and board expenses incurred by residents in a special school. The argument is that it would be more expensive to serve the individual as well in a nonspecialized setting. The argument depends on the presumption that the individual in question has some legitimate claim to be served at all, or as well.³³ Gallaudet College, the National Technical Institute for the Deaf, and other specialized schools for handicapped children are all to some degree rationalized on these grounds.

Internalization of Externalities

Many benefits of government programs are received beyond the bounds of the political jurisdiction supporting the program. These benefits are termed “externalities” from the viewpoint of the supporting jurisdiction. When the externalities are large and of positive value, there typically will be less investment in the program than would be socially optimal. This can be made clear by way of example. Assume that a local school district could conduct a research program to develop a medical and educational treatment program for autistic children that was effective in bringing them back into normal society. If the cost were \$1,000,000 and there were very few autistic children in the local district, it is doubtful that the district would proceed with the program. The local benefits would be too small when compared with the cost. If the program were expanded nationwide, however, the research and development costs of one million would be small compared with the potential nationwide benefits. If the Federal Government were to fund the research program, the externalities as viewed by the local district would be internalized as viewed from the national level, and the proper incentives would exist for reaching the socially optimum level of investment in the program. This same rationale is also used in urging Federal Government support of training. Many states are hesitant to invest heavily in training professional personnel (e.g., physicians, lawyers, etc.) who then often migrate to another state. Again externalities exist that can be internalized by broadening the political jurisdiction from the local or state level to the Federal level.

Control and Responsiveness

Arguments related to control and responsiveness rationales revolve around (1) the maintenance of standards of service quality, (2) fair provision of services, and (3) the appropriate level of governmental responsibility associated with the production of services.

Quality control arguments are frequently offered in support of regulatory functions. Such arguments take the following representative form: It is the job of the Federal Government, and specifically the Food and Drug Administration, to insure uniform minimal quality of some class of pharmaceuticals as a means of protecting the health and safety of all citizens; or the National Bureau of Standards must assess

³³ However, counter-rationalizations are invoked in support of moves to reduce or do away with provision of service in the form of specialized schools. The argument in this case sometimes takes on the form: Specialized schools are too expensive for the numbers they serve and hence should be abolished. Questioned implicitly in the process is the legitimacy of claimant demands for specialized services.

the relative performance characteristics of sensory aids. Often appeals to quality and uniformity of standards are offered in support of manpower and facilities investments as well. And, finally, the promulgation of guidelines is often couched in quality maintenance language.

Minorities and other special interest groups have long realized that their demands are more responsively met at some levels of government than at others, and hence a number of functions related to those demands are supported by responsiveness rationales. The issue of *oversight*, both legislative and executive, is commonly involved in this instance.

A variant of this responsiveness theme, and one that is more implicit than explicit, concerns the relative "visibility" of the service budget and the related *political* externalities it may create. Suppose that a particular service, such as comprehensive recreation programs for the mentally retarded, were proposed in the budget of some locality. As compared to the total budget, this proposed program may be a large enough proportion to gain visibility and hence be subject to extraordinary political scrutiny. Why should a local politician run the risk of paying a political cost for his promotion of such a program when he has little likelihood of reaping commensurate benefits—i.e., increased or at least undiminished political support? On the other hand, taken as a proportion of the total Federal budget for the mentally retarded or, better still, for all the handicapped, the aggregate of all such recreation programs would probably be small enough that it would not attain "visibility," and hence would have a greater probability of being accommodated. The illustration is not as far fetched as it initially appears, and it goes part of the way toward answering our opening question about why some services are produced in certain places, while others are not.

Debates about the appropriate level of responsibility to conduct or produce a variety of services take a number of characteristic forms, all of which are essentially concerned with control and responsiveness. For instance, one such form might be as follows: It is the responsibility of the Federal Government to train doctors, researchers, or whoever, and to conduct research and development; if the Federal Government does not do it, then it will not get done at all. Or this alternative form is sometimes encountered: It is the responsibility of the Federal Government to respond to those suffering from catastrophic problems, e.g., chronic renal failure, severe congenital heart disorder, and others; if it does not respond, then no one will. Counterarguments exist, of course, and normally question either the premise which legitimates a claim to service or the one that sets the level at which the overall system should be responsive. Debate on decentralization-centralization is the standard medium for this latter issue.³⁴

Innovation: Stimulation/Diffusion

This twofold rationale for providing seed money, initial construction and staffing funds, and disseminating information is basically that states and locales may desire to improve the service system but (1) because of lack of start-up funds

³⁴ Kaufman takes the matter up as does W. E. Moore, *The Professions: Roles and Rules*, Russell Sage Foundation, New York, 1970, pp. 167ff.

or political inertia, they have difficulty in doing so, or (2) because of lack of available knowledge about improved ways of providing services, they cannot do so.

Rationales, being as they are arguments or appeals to marshal support or to justify actions, take on numerous, seldom unambiguous, and often contradictory forms. For instance, every one of the control and responsiveness rationales commonly used could themselves be interpreted in terms of the rationales presented in earlier subsections. They are nevertheless commonly used, important, and must be taken systematically into account if our hopes are to comprehend a system as complex as that providing services to handicapped children and youth. Table 3.1 summarizes the foregoing discussions. The table's basic message is that just as many or more rationales exist for regulation, investment, and research and development functional mechanisms (the relatively "underdeveloped" three) as exist for provision and purchase of services (the "well developed" two).

Table 3.1
COMMON RATIONALES RELEVANT TO FUNCTIONAL MECHANISMS

Rationales	Direct Service Provision	Purchase of Services Through State and Local Agencies	Regulate Service Providers	Investment in Means of Producing Services	Research Development and Dissemination of Information
Redistribute resources					
Increase net productivity	M	M	M	M	L
Increase equity	M	H	H	H	L
Fill unmet needs, accom- modation	L	H	H	H	L
Economies of scale/critical mass	H	-	L	H	H
Internalized externalities					
Total population benefits	L	L	-	H	H
Visibility	L	L	-	L	L
Control and responsiveness					
Quality control	-	-	H	L	-
Fair provision	L	M	M	M	L
Level of responsibility	L	-	M	M	H
Innovation: stimulation/ diffusion	-	H	-	H	H

NOTE: Degree of relevance: H equals high, M equals medium, L equals low.

THE POLICY PROCESS

A final way of visualizing the handicapped youth service system is to consider a general sequence of events through which its policies and programs flow from earliest initiation through ultimate termination.³⁵ This short subsection defines the policy process in a useful but not particularly novel way. It is included so that we

³⁵ This process is not novel. It is basically the result of theoretical insights generated by H. D. Lasswell, most recently in his *A Pre-View of Policy Science*, Elsevier, New York, 1971, Chapter 5. Equivalent labels to those employed by Lasswell have been adopted for our more specific purposes.

may refer to steps in this process later when we describe current programs for handicapped youth, without having to stop there to define what we mean by the policy process. Describing parts of the service system in terms of this sequence of decisions has helped us understand the dynamics of the system and, in the next segment of our research, may contribute to suggestions for its improvement.³⁶

Initiation/Invention

The earliest phase of the sequence begins when a given problem is initially sensed. Once a problem is recognized, many possible means to alleviate, mitigate, or resolve it may be explored. In this early creative phase, one comes to expect that numerous ill-resolved and inappropriate "solutions" will be advanced. Indeed, as much as casting about for answers, this phase concerns sharpened redefinition of the problem. Invention refers to the fragile business of reconceptualizing a problem, laying out a range of possible solutions, and then beginning to locate potentially "best" choices within that range.

Estimation

Estimation concerns predetermining risks, costs, and benefits associated with each of the various policies or solutions that emerge from the initiation/invention phase. Calculation of the likelihoods that the various possible outcomes will occur is largely focused on empirical-scientific and projective issues, while the imputation of the desirability of those outcomes is more clearly biased toward normative concerns.³⁷ The objective of estimation is to narrow the range of plausible policy solutions, by excluding the infeasible or the truly exploitative for instance, and to order remaining options according to well defined scientific *and* normative criteria.³⁸ Resource analysis, Bayesian statistics, forecasting, model construction, and an assortment of other methodologies have evolved in response to the first requisite; market research, political opinion, and other survey techniques benefit analyses, and rarely, *a priori* social-ethical assessment have been used for the second. An interesting combination of scientific and normative perspectives is inherent in efforts to conduct systematic social experiments, an activity held to be essential by, among others, Alice Rivlin. "[Social experimentation] must be an important federal activity, if we are to achieve breakthroughs in social service delivery."³⁹

³⁶ The process concept has been applied with some success in at least two specific instances to understand why large-scale and complex systems were not performing adequately. See Martin Shubik and G. D. Brewer, *Models, Simulations and Games: A Survey*, The Rand Corporation, R-1060-ARPA/RC, May 1972; and G. D. Brewer, *Politicians, Bureaucrats and the Consultant: A Critique of Urban Problem Solving*, Basic Books, New York, 1973.

³⁷ See Philip Morse and G. E. Kimball, *Methods of Operational Research*, John Wiley, New York, 1950, for a fuller explanation of these important differences.

³⁸ A typical pitfall in the process is failure to examine a range of diverse interpretations, rationales, orderings, and calculations. This requirement is obvious, but in practice cannot be stressed enough.

³⁹ Alice Rivlin, *Systematic Thinking for Social Action*, The Brookings Institution, Washington, D.C., 1971, p. 120.

Selection

Ultimately, someone must select one or a few of the "invented" and "estimated" options, and that considerable task has traditionally been the responsibility and province of policymakers, however that role is characterized.⁴⁰ Narrowly circumscribed analysts seldom confront the problem of striking a balance between the rational calculations done during the estimation phase and the multiple, changing, and conflicting goals operating throughout the entire sequence. It is a problem, among others, that is ultimately resolved by the politician, who

has to balance the myriad forces as he sees best, and the citizens judge him only to a limited extent by his accordance with their preconceived ideas. Rather, a great political leader is judged like a great composer; one looks to see what he has created.⁴¹

And that brings us to implementation, the means for carrying out selected policies.

Implementation

Implementation refers to executing a selected option according to a plan. As witnessed by heightened interest and statements of concern about failures of public policy implementation,⁴² however, it is a phase of the overall decision sequence that is little understood, not particularly appreciated, and not well developed, or as one distinguished group recently summarized it:⁴³

We became increasingly bothered in the late 1960s by those aspects of the exercise of government authority bound up with implementation. Results achieved by the programs of that decade were widely recognized as inadequate. One clear source of failure emerged: political and bureaucratic aspects of the implementation process were, in great measure, left outside both the considerations of participants of government and the calculations of formal policy analysts who assisted them. Acting through governmental organizations existing in the midst of political cross-pressures is a necessary feature of modern public affairs. The art has been but little developed.

It has become clear that to assess government performance, one must understand the implementation mechanisms operating to generate that performance, and one recommended approach has been to consider the incentive systems underlying individual, collective, and institutional behavior.⁴⁴ Improving governmental per-

⁴⁰ Bernard Crick, *In Defense of Politics*, Penguin, Baltimore, 1964 (rev. ed.), captures the essence of selection. "So many problems are only resolvable politically that the politician has a special right to be defended against the pride of the engineer or the arrogance of the technologist. Let the cobbler stick to his last. We have a desperate need for good shoes—and too many bad dreams," p. 110.

⁴¹ W. A. Lewis, "Planning Public Expenditures," in M. F. Millikan (ed.), *National Economic Planning*, National Bureau of Economic Research, New York, 1967, pp. 201-227, quote at p. 207.

⁴² Charles Schultze, *The Politics and Economics of Public Spending*, The Brookings Institution, Washington, D.C., 1968, pp. 104-105.

⁴³ The Research Seminar on Bureaucracy, Politics, and Policy, *A Report on Studies of Implementation in the Public Sector*, Harvard University, The John F. Kennedy School of Government, Cambridge, Massachusetts, March 1973, p. 1.

⁴⁴ J. S. Berke and M. W. Kirst, *Federal Aid to Education: Who Benefits, Who Governs*, D. C. Heath, Lexington, Massachusetts, 1972.

formance may depend on redesigning those underlying systems of incentives, if one concurs with Charles Schultze's observations:⁴⁵

[The failure of federal programs is] positive failure—the failure to build into federal programs a positive set of incentives to channel the activities of decentralized administrators and program operators toward the program objectives.

Evaluation

Initiation/invention and estimation are primarily forward-looking, anticipatory activities. Selection stresses the urgency of the present. Evaluation is backward-looking, concerned with inquiries about system performance and individual responsibility. Typical topics and questions that are reflected in the idea of evaluation include the following: What officials and what policies and programs were successful or unsuccessful? How can that performance be assessed and measured? Were any criteria established to make those measurements? Who did the assessment, and what were his purposes? To what ends was the valuation directed, and were they accomplished?

Evaluation is a necessary phase in the decision sequence, but the incidence of comprehensive and competent efforts in a wide variety of places is not great.⁴⁶ Institutionalization of evaluation can be either internalized (in-house) or externalized (such as by an auditing firm, a consultant, or an inspector general).⁴⁷ Evaluation is, or should be, a necessary input to the next and final phase of the decision sequence.

Termination

Termination refers to the adjustment of policies and programs that have become dysfunctional, redundant, outmoded, unnecessary, and so forth. From the conceptual and intellectual points of view, it is not a well developed phase, but one whose importance in current affairs must not be underrated. How, for instance, can a policy be rationally adjusted or terminated without its having had a thorough evaluative assessment? Who will suffer from the termination? What provisions of redress have to be considered? What are the costs involved to the individuals affected by the termination? Can they be met from other sources? What might be learned in the termination process that will inform the initiation and invention of new policies or programs in the same or related fields? The list of questions is long indeed,⁴⁸ but ignoring them or ignoring the fact that termination is linked intimately to the other steps in the decision sequence is both unnecessary and undesirable.

⁴⁵ Schultze.

⁴⁶ H. D. Lasswell, "Towards a Continuing Appraisal of the Impact of Law on Society," *Rutgers Law Review*, Vol. 21, No. 4, Summer 1967, pp. 645-677.

⁴⁷ The literature on the subject is not large, but it is growing rapidly. For an overview see F. G. Caro (ed.), *Readings in Evaluation Research*, Russell Sage Foundation, New York, 1971; and E. A. Suchman, *Evaluative Research*, Russell Sage Foundation, New York, 1967, Chapters 1-2, 4-7, and 10.

⁴⁸ Insights may be gleaned from the legal profession in which termination is an established part of contract law. Such expertise does not yet exist in other specialized fields.

4. THE ISSUE OF GOALS AND SYSTEM PERFORMANCE

To understand a system's purpose, one needs to understand its operating goals¹: Where is the system heading? To measure its performance, one needs criteria²: Has the system arrived where it was meant to go, and if not, how far off the mark is it?

As we surveyed the myriad goals or objectives of the present system serving handicapped youth, we were struck by their multiplicity, their vagueness, the contradictions between operational and stated goals, and the idealistic and absolute nature which made some of the stated goals somewhat less than useful in the practical selection and operation of programs.

To specify evaluation criteria for handicapped youth (or other) programs, one must consider the goals of the overall system of services from several points of view, including those of *the affected population*, those of *officials responsible for formulating and executing individual policies and programs*, and those of *society as a whole*.³ Multiple, conflicting points of view surely will exist. It is less obvious, but nonetheless important, that programmatic evaluations should be likewise based on multiple performance criteria.

¹ Goals are categories of preferred events, whether events desired in themselves and events desired because they are instrumental, e.g., health is desired in itself and is preferred to illness, and productive employment is desired as an instrumental event and is preferred to mass unemployment. See Daniel Lerner and H. D. Lasswell (eds.), *The Policy Sciences*, Stanford University Press, Stanford, California, 1951, pp. 9-10.

² As defined here, value refers to the worth or utility of an event rather than to the measures or criteria on whose scale such valuation is made. Furthermore, values and criteria can be distinguished from norms, which are rules governing behavior. Once criteria are established, the valuation of events on those criteria provides the grounds for rejecting or accepting particular norms as undesirable or desirable. In practice the major point is that values influence decisions in the selection of possible goal events to be considered (a program's "menu" of potential goals), and in the preference ordering of these goals. See "Concept of Value," *International Encyclopedia of the Social Sciences*, Macmillan, The Free Press, New York, 1968; and K. E. Boulding, "The Ethics of Rational Choice," *Management Science*, Vol. 12, February 1966, pp. 161-169.

³ For a discussion of ways in which goal values are determined and justified, see, for example, Abraham Kaplan, *American Ethics and Public Policy*, Oxford University Press, New York, 1963; see also C. E. Lindblom, "The Handling of Norms in Policy Analysis," in Abramovitz et al., *The Allocation of Economic Resources: Essays in Honor of Bernard Francis Haley*, Stanford University Press, Stanford, California, 1959, pp. 160-179.

GOALS AS A MULTI-FACETED PROBLEM

Let us first consider goals of *the affected population*. From discussions we have had with sensorially handicapped people, we surmise that if they were to set program service goals, such goals would be of the "greatest good for the greatest number" nature and would include concepts such as

- Assurances that the needs of all handicapped persons for services such as housing, medical care, and education are adequately met; and
- Assurance that each handicapped person has the opportunity to develop to the maximum functional capability consistent with his physical or mental impairment.

This position is mediated somewhat in actuality. The objective of some members of this class of individuals would not necessarily be for the government to meet every need and to develop every potential of each handicapped person, but rather that *somehow* those needs must be met and the potential realized. This mediation of goal can occur because many of the handicapped simultaneously want to be as self-sufficient and self-reliant as possible.⁴ Attaining the greatest good for the greatest number *and* developing social and economic independence for each handicapped person are in this case complementary and supportive goals. In fact, these goals have only been attainable for selected individuals because serving all handicapped persons has required a financial commitment that our society in general has not been willing to make. Because of resource limitations, other less costly objectives must be considered.

The goals of *officials responsible for formulating and executing individual policies and programs* are reflected in the services offered within particular programs designed to implement broad policy pronouncements. For example, one purpose of the Federal Vocational Rehabilitation Act is "... assisting States in rehabilitating handicapped individuals so that they may prepare for and engage in gainful employment to the extent of their capabilities ..." Subsequent sections discuss how these broad types of statements have been translated into actions for each pertinent class of services currently delivered to the handicapped population. Generally, service program goals may be consistent with the goals of an *individual* handicapped person but typically do not promise to meet the needs and develop the potentials of *all* handicapped persons. Furthermore, the phrase, "subject to budget constraints," is the key implicit or explicit qualification of nearly every service program objective. We consider this constraint directly for each class of service.

The goals of *society as a whole* are fundamentally a collective ethical problem and hence not easily determined. One might hazard a guess as to what they are by considering governmental actions over a whole range of programs for the handicapped. Congress, the Office of the President, and the Department of Health, Education and Welfare have responsibilities so broad that all in a sense represent society's goals by the actions actually taken; but having made this global observation, the

⁴ At the root of this discussion is a basic concern for the quality of life led by the handicapped person; it is a very difficult question, and one that we will consider in greater detail in our second report. For a good introduction to the scientific problems associated with the concept, see N. C. Dalkey, Ralph Lewis, and David Snyder, *Measurement and Analysis of the Quality of Life*, The Rand Corporation, RM-6228-DOT, August 1970, pp. 1-40.

analyst does not have much solid information to guide his detailed evaluation efforts. Certainly these overall societal objectives share humanitarian aspects and resource constraints with the objectives of the handicapped population and those providing individual service programs. But unique and conflicting aspects of the actual goals tend to predominate, thereby making the determination of "Society's" valuation of goal events nearly impossible.

Tradeoffs of services across populations must be made, and the basis on which tradeoffs are made may take extreme forms:

- Minimize current public expenditures—which implies low emphasis on expensive services such as education.
- Minimize total expected public expenditures over the lifetime of the handicapped—which implies high emphasis on vocational rehabilitation and preventive services and considerably less emphasis on treatment and welfare.
- Maximize services provided primarily to the severely handicapped and the poor—which implies a conscious discrimination against the mildly handicapped and the non-poor.
- Maximize services for the mildly handicapped to achieve greater effectiveness per dollar expended—which implies discrimination of another extreme.
- Maximize the number of people served for a given fixed budget—which implies that those having relatively greater needs will not be served.
- Minimize costs for a specified number of people—which violates several desirable objectives in obvious ways.

Other extreme possibilities may be described to indicate the basic dilemma of trying to determine societal, aggregate objectives with respect to the overall handicapped population or to the individuals comprising it. In addition there is a serious problem with the relevant time frames and perspectives operating for various participants. "The person or group with a time orientation toward the present [e.g., politicians] will have difficulty in seeing the value of inoculations against disease, a future occurrence."⁵ But, in contrast, the handicapped individual's orientation may span his lifetime.

To begin working our way out of this thicket, we have concentrated on the stated objectives of individuals responsible for formulating and executing specific policies and programs and, for our immediate purposes, this has meant considering President Nixon's recent public statements on the matter and carefully reviewing former Secretary of Health, Education and Welfare, Elliott Richardson's various public positions and adopted policies.

FEDERAL GOALS

Accounting for public positions and related policies is an important activity, for as Geoffrey Vickers points out, "When we open our eyes to the scene around us, we find goals already set. Policies are being implemented, institutions are in action with

⁵ S. H. King, *Perceptions of Illness and Medical Practice*, Russell Sage Foundation, New York, 1962, p. 53.

all the historical momentum of buildings and establishments. Men are in mid-career. Budgets, even budget headings, have acquired prescriptive rights . . .”⁶

The basic thrust of many of these extant events may be summarized in current trends: to increase the comprehensiveness of Federal activities—to insure integrated rather than fragmented service; to increase participation possibilities in formulating policies and programs; to improve accountability procedures; to be aware of unintended consequences of individual policies and programs; to improve the structuring and functioning of service-providing institutions; and to reduce personal dependency on the government at all levels.

The concepts behind the trends were generally laid out in President Nixon’s recent message on human resources in terms of “Four Principles,” which may be summarized as follows:⁷

- Increase individual freedom of choice through government initiatives to give individuals a better opportunity in life.
- Supply incentives and opportunities instead of providing services directly.
- “Rather than stifling initiatives by trying to direct everything from Washington, Federal efforts should encourage state and local governments to make those decisions and supply those services for which their closeness to the people best qualifies them.”
- Insure strict fiscal responsibility to avoid inflation, recession, or tax increases.

While these are suitable general statements of objectives, they do not go far enough in their detail or extent of coverage to give more than global insights into how programs should be structured.

A key specific source of insights into the actual, operating Federal goals is contained in Elliott Richardson’s remarkable report, “Responsibility and Responsiveness (II),” *Report on the HEW Potential for the Seventies*, January 18, 1973. It is remarkable in the sense that operating goals are clearly and concisely articulated as are the policy changes needed to attain these goals.

- *Increasing comprehensiveness*: “In planning and programming, our perspective must be comprehensive. . . . Integration must replace fragmentation.” And, the scope of HEW must expand, “In the conceptual direction of the President’s proposed Department of Human Resources, a direction of still greater comprehensiveness.” (p. 10)
- *Increasing participation*: “. . . the effective management of HEW is crucially dependent upon: . . . the processes which define the relationships among people—the means openly and equitably to ensure the orderly and timely participation in the decisionmaking process by all affected parties . . .” (p. 13)
- *Increasing accountability*: (Improving HEW management means) establishing and improving “clear and fair accountability.” (p. 13)
- *Increased awareness of (un)intended consequences*: One presumes that this refers to the sensing of externalities, both positive and negative—disseminating and promoting the former and redressing and eliminating the latter. (Improving

⁶ Sir Geoffrey Vickers, “Who Sets the Goals of Public Health?” *The Lancet*, Vol. 1, March 1958, pp. 599f.

⁷ As reported in *Education Daily*, Vol. 6, No. 42, March 2, 1973, pp. 1-2.

HEW management means developing) "informed and sensitive appreciation of the consequence of intended actions." (p. 13)

- *Institutional reform:* "... institutional reform can ... contribute to the conservation of limited resources. It can seek to assure that the agencies, organizations, and skills that are capable of making some contribution to the protection and development of human resources are properly deployed." (p. 21)
- *Foster non-dependency:* "... the non-dependency goal would suggest that our objectives should be: 1. To create preventive mechanisms which identify the likelihood of people sliding down the scale of personal freedom of choice and reliance on others, and which remove the dangers that threaten the status of those people. 2. To create the conditions necessary to achieve earning capacity, self-care, and personal freedom of choice. 3. To assist those who are not self-supporting to progress to the highest position on the scale that is within their capability. And 4. To ensure the adequacy of income and services, qualitatively as well as quantitatively, and the preservation of human dignity, for those who are unable to progress up the scale."⁸

Because the "non-dependency" rubric subsumes so many more specific goals, it is worth reflecting on what it might mean for policymaking, institutional structure, and service provision. Specifically, what does it imply for clarifying objectives sufficiently well that more pointed evaluations of effectiveness might be carried out?⁹

One way of translating the non-dependency concept into operational terms would be to list succinctly a broad range of objectives potentially implied or embedded in the concept. These might take the following form:

- Assurance that the needs of each handicapped person are met, and that each has the opportunity to develop to his maximum vocational and social potential.
- Effective provision of individual services that foster independence subject to budget constraints.
- Effective provision of closely related "packages" of services that foster independence, also subject to budget constraints.
- Minimization of current direct costs of providing services, subject to service obligation constraints.
- Minimization of total costs of providing services over the entire lifetimes of members of the handicapped population, subject to service obligation constraints.

It is important to distinguish between the ideas of *equity* and *adequacy*. Equity refers to social choices that distribute service fairly to the population. Increasing equity with a fixed level of resources implies providing lower levels of service to

⁸ Secretary of Health, Education and Welfare, "Planning Guidance Memorandum—1972," February 15, 1972.

⁹ An important issue associated with the concept of "non-dependency" centers on the immutable fact that a proportion of the handicapped will never achieve anything like "normal" levels of non-dependence, indeed the permanent dependence of the severely handicapped is not to be treated casually. Leslie Gardner has treated this matter forthrightly. "[In the case of the severely handicapped] why continue to press for independence: would it not be preferable to accept severe disability gracefully and to come to terms with the inferior status (by current standards) and to work towards ... 'planned dependence'? In short, should we not educate for independence—indeed for inferior status—although this is against the grain of present-day ideas of citizenship for all, with its emphasis on work for gain?" Leslie Gardner, "Planning for Planned Dependence?" *Special Education*, Vol. 58, March 1969, pp. 27-30, at p. 28.

greater numbers of the population. Adequacy refers to the availability of enough service to meet the need; i.e., what portion of those in need receive quality services?

If the main concern is equity of service delivery, this implies certain functional emphases in the areas of research, development, demonstrations, and experiments to improve knowledge and to increase productivity which, in turn, make services available to more individuals at less cost. It also implies that we must create more comprehensive, responsive, and reliable statistical systems and a more geographically disaggregated service system to insure that the services are fairly distributed. It also means that provisions for planning and managing the services must be improved.

If service delivery is considered inadequate, then the problem is in some ways harder. Its resolution implies that attention should be focused on research and development to create services and "solutions" where none presently exist, and it furthermore implies that the level of service resources must be increased.

CONTRADICTIONS AND OTHER PROBLEMS

There are at least five stated or observable contradictions in the objectives of the system serving handicapped youth. In addition, there are several related, primarily technical problems that do not appear to be easily resolved but that impede the realization of most of these objectives.

There is no national policy for handicapped children and youth. A large portion of the operational problem apparently occurs because there are basic contradictions embedded in the objectives established for institutional elements comprising the service delivery system.

There are very few service programs that benefit handicapped children and youth that are the *primary* responsibility of an operational agency. Programs serving handicapped youth exist literally everywhere in the Federal Government, but hardly anywhere are these programs the main order of business.

The objective of increased participation in decisionmaking in fact does not appear to be realized. Someone must select a single choice from the array of those presented for a policymaker's attention, and this process inevitably results in a forced choice when resources are limited but demands on the resources are not. Resource choices are always being made, but with a prime operational goal being a reduction in the overall Federal budget, apparently the number of persons participating in the allocation of that budget has not increased.

There is a contradiction between the increasing insistence on individual freedom and the parallel trend toward ever more complex forms of social intervention.¹⁰

The objective of insuring equality of opportunity does not seem to be realized with respect to the handicapped, any more than it does for other disadvantaged groups in our society.¹¹

¹⁰ This is a major theme in Gunnar Myrdal, *Beyond the Welfare State*, Yale University Press, New Haven, Connecticut, 1959, pp. 99-102. It is considered in some detail in Jerald Hage and Michael Aiken, "Relationship of Centralization to other Structural Properties," *Administrative Science Quarterly*, Vol. 2, 1967, pp. 72-92.

¹¹ The matter is not novel and has in fact been the source of unending reports, studies, books, and entreaties. See D. C. Marsh, *The Future of the Welfare State*, Penguin, Baltimore, 1964, for an overall

Not only are there fundamental contradictions evident in some of the very global objectives posited for handicapped individuals, but there are naturally resultant problems in measuring progress toward those relatively general objectives.

It is safe to say that we require multiple measures and criteria for assessing system objectives. We need them to avoid cheating, suboptimization, and efforts to "beat the system."¹² More importantly, we need basic information before those multiple measures may even be utilized.¹³

Because we are dealing with a variety of service objectives, it is useful to consider one set of simple dimensions along which several of the stated objectives might be measured, all the while taking the information deficiency point into account. We have developed four dimensions and have created criteria to measure programs on each of them: (1) effects on the individual handicapped person, (2) future economic effects, (3) current resource consumption, and (4) equity. These dimensions permit one to make comparative judgments from several viewpoints without getting bogged down in arguments over which objective is "best."¹⁴ In fact, it is quite conceivable that similar policy recommendations might flow from analyses using different objectives, i.e., the so-called "dominant choice." Our subsequent report will present data on a spectrum of criteria described in Sec. 11, and the reader may assign his own weights to each criterion to suit his own objectives.

These are hard matters to understand and resolve. At a minimum, one should be made aware of what it means to pursue each of the stated objectives to something like its logical conclusion before deciding definitely on a particular allocation of resources. It may very well turn out that the objective may not be attainable or it may cost a great deal in terms of other, more feasible objectives foregone in the bargain.

view; and see J. S. Coleman et al., *Equality of Educational Opportunity*, U.S. Department of Health, Education and Welfare, Office of Education, 1966, for a more detailed and well known statement.

¹² Alice Rivlin has spoken about these practices with notable frankness in *Systematic Thinking for Social Action*, The Brookings Institution, Washington, D.C., 1971, pp. 126-130.

¹³ On the information deficiency problem, see E. B. Sheldon and W. E. Moore (eds.), *Indicators of Social Change: Concepts and Measurements*, Russell Sage Foundation, New York, 1968; Mancur Olson, *Toward a Social Report*, U.S. Department of Health, Education and Welfare, 1969; and Daniel Bell, "A Social Report in Practice," *The Public Interest*, No. 15, Spring 1969, pp. 98-105, where this essential statement concludes the paper: "The nation must decide which objectives should have the higher priorities, and choose the most efficient programs for attaining these objectives. Social reporting cannot make the hard choices the nation must make any easier, but ultimately it can help to ensure that they are not made in ignorance of the nation's needs." P. 105.

¹⁴ Two standard works detail what is involved in this issue: S. B. Chase (ed.), *Problems in Public Expenditure Analysis*, The Brookings Institution, Washington, D.C., 1968; and Robert Dorfman (ed.), *Measuring Benefits of Government Investments*, The Brookings Institution, Washington, D.C., 1965.