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STATE PLANNING OFFICES' APPROACHES TO REGIONAL PLANNING AND SUB-
STATE REGIONAL DELINEATION: THEORIES, STRATEGIES AND PRACTICES

by 59V

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	iv
LIST OF TABLES	v
LIST OF ILLUSTRATIONS.	vii
Chapter	
I. THE REGIONALIZATION PROCESS: ITS IMPLICATIONS FOR STATE PLANNING	i
A. Introduction	
B. The Regionalization Process: A Socio- Economic Evolution	
C. Political Reactions to the Regionalization Process	
D. Sub-State Regional Delineation: A Policy Tool for State Planning	
E. A Challenge and an Opportunity for State Planning Agencies to React Positively to the Regionalization Process: The Confusion and Proliferation of Federal Regional Development Programs	
F. The Dilemma Posed by the Regionalization Process for State Planning	
II. A REVIEW OF THEORETICAL REGION-TYPES AVAILABLE TO STATE PLANNERS.	26
A. Starting the Sub-State Regional Delinea- tion Program	
B. The Morphology of Regions	
III. THE MAJOR PURPOSES OF REGIONAL PLANNING FROM THE VIEWPOINT OF STATE PLANNING DIRECTORS: IMPLICATIONS FOR REGIONAL STRUCTURING.	38
A. The State Planner and the Multi-Purpose Planning Region	
B. Regional Planning As Seen by State Planning Directors: What Is and What Ought To Be	
C. The Major Purposes of Regional Planning: Implications for the Regional Structure	

Chapter	Page
IV. SELECTION OF A REGION--TYPE SUITABLE FOR THE MAJOR PURPOSES OF REGIONAL PLANNING . . .	55
A. Statement of the Problem	
B. Evaluation of the Theoretical Region- types	
C. Testing the Popularity of the Nodal Region Among State Planners	
V. IMPLEMENTING THE REGIONAL DELINEATIONS: PROBLEMS ENCOUNTERED AND STRATEGIES USED BY STATE PLANNERS.	67
A. Problems Internal to the State Planning Agency Itself	
B. Implementation of Regional Delineations: Support, Opposition and Strategies	
C. Technical Aspects of the Implementation Program: Organizing and Staffing the Regional Planning Agency	
D. Addendum on the Nodal Region	
VI. A SUMMARY	87
A. Findings and Conclusions from the Study	
B. Further Research Needs	
APPENDIX I.	93
APPENDIX II	98
APPENDIX III.	100
Part I: Selection of the Nodal Region's Central Locus	
Part II: Selecting Criteria Useful in Delineating the Boundaries of Sub-State Regions and a Demonstration of the Suggested Delineation Methodology	
BIBLIOGRAPHY.	135

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LIST OF TABLES

Table	Page
1. Pressures Upon State Governments to Delineate Regions	10
2. State Planning Directors' Views Concerning the Growth of Regional Planning Agencies.	21
3. State Planning Directors' Projections About the Future of Regional Planning	22
4. A Survey of Areawide Planning Projects (491 Projects) Undertaken by 143 Cities in 1966.	40
5. What State Planning Directors See as Being the Major Functions Currently Carried Out by Existing Regional Planning Agencies	42
6. State Planning Directors' Views on the Major Functions of Regional Planning Agencies: What Is and What Ought To Be.	44
7. Region-Types Utilized by State Planning Offices in Their Delineation Documents.	66
8. The State Planning Directors' Academic and Occupational Histories.	70
9. State Planning Directors' Organizational Linkages to the Governor.	71
10. Expected Resistances to, and Support For, Regional Planning Agencies at the Local Level of Government as Seen by State Planning Directors	74
11. Expected Resistances to, or Support for, Regional Planning Units as Uniform Service Areas for All State Government Programs	75
12. Expected Resistance to, or Support for, Regional Planning Agencies at the Federal Level of Government as Seen by State Planning Directors	76
13. State Planning Directors' Optimum Strategies Used to Develop Support for Regional Planning Agencies.	79

Table	Page
14. State Planning Directors' Views on the Structure and Financing of Regional Planning Agencies . .	81
15. State Planning Directors' Choices of Primary Staff Occupations for New Regional Planning Agencies.	84
16. The Region-Types Favored by State Planning Directors for the Purposes of Organizing Regional Planning Locally	86
17. The Major Criteria Utilized by Twenty Five State Planning Offices in Delineating Their Sub-State Planning Regions.	108
18. Average Speed and Congestion Statistics Used in the Delineation Methodology.	122

LIST OF ILLUSTRATIONS

Plate		Page
I.	The Chattanooga Planning Region	126
II.	The Knoxville Planning Region	128
III.	The Tri-Cities Planning Region.	130
IV.	The Lower Cumberland Planning Region.	132
V.	The Upper Cumberland Planning Region.	134

CHAPTER I

THE REGIONALIZATION PROCESS: ITS IMPLICATIONS FOR STATE PLANNING

A. Introduction.

One of the more significant developments during this decade in the field of American planning has been the creation and multiplication of regional planning agencies. Many of these regional agencies plan for a single county unit; others have multi-county jurisdictions. In recent years, numerous federal programs have been initiated which have required local governmental units, faced with similar problems, to join together in co-operative planning actions.

State governments have reacted in diverse ways to federal pressures for regional co-operation among local governments. Some states have left attempts at regional co-operation and regional delineations for policy purposes up to local governments, private agencies, or federal agencies. An increasing number of state governments have come to believe that the objectives of regional planning might be better served if the state was to undertake a statewide, regional delineation program. State planners have asserted that the state can introduce some rational uniformity and spatial order into the rapid proliferation of regional units.

Chapter I explores the historical socio-economic and political forces which have led to these increasing demands for regional co-operation and planning among local governments.

This regionalization process has presented state governments with a crucial problem, a challenge, and a potential policy tool for statewide, comprehensive development planning and programming.

B. The Regionalization Process: A Socio-Economic Evolution.

Human settlement patterns have historically been linked to resource deposits, transportation networks, and the existing levels of technological development, especially the development level of transport nodes. Technological changes or extensive improvements in the transport system, or increases in an area's economic productivity, create corresponding changes in an area's settlement patterns. In the American experiences, the introduction of the railroad, west of the Appalachian mountain barriers, was a major force in transforming a 19th century, Mid-Western rural, subsistence economy into a specialized commercial economy linked to eastern markets. Human settlements no longer had to be linked to major American rivers or to sea coasts in order to have adequate transport facilities. The railroads became America's main commercial arteries during the 19th and early 20th centuries. Urban settlements which were not on the railroad lines had a tendency to lose their populations to cities more favorably located.

After the 1920s, two related technological and social changes disrupted the settlement patterns formerly associated

with the railroads. Agricultural mechanization, with its corresponding increases in productivity, produced an increase in farm size and a decrease in rural population totals. This decrease in the rural consumer base was disastrous for many small service and retail business centers located in the agricultural areas. The mass acceptance during this period of the automobile and the truck, with the resulting pressures on state and federal legislatures to improve the road system, created a new mobility for workers and consumers. People could travel farther in less time to obtain the goods and services they needed. The result was a drastic decline in the very small to small urban settlements (roughly cities under 5,000 population) originally established to service farmer-consumers traveling by horse and buggy and a general increase for certain larger cities.¹

Two long term, socio-economic trends are reflected in America's current demographic and economic growth patterns

¹Interesting historical accounts and analyses of these transitions are contained in Brian J. L. Berry, Geography of Market Centers and Retail Distribution (Englewood Cliffs: Prentice-Hall Inc., 1967), pp. 5-10, 114-116; Douglas Chittick, Growth and Decline in South Dakota Trade Centers, 1901-51, Extension Bulletin 488 (Brookings: South Dakota State, May, 1955); and Karl Fox, "The Study of Interactions Between Agriculture and the Non-Farm Economy: Local, Regional and National," Journal of Farm Economics, XLIV (February, 1962), 15-17.

and in their spatial locations. The first trend is an ever-increasing population multiplication and mobility. The second trend is the increasing spatial concentration of the population. Population mobility has been, and is continuing to be, channelled toward specific geographic points; the larger urban centers. However, these migration flows show two conflicting patterns. The first generation migrants flow from rural areas seeking opportunities in the central city. A second and later migrant flow is contained in the exodus of the white middle classes from the major central cities into surrounding suburbs and rural fringe areas. The first migration flow can produce serious "depression" effects in rural areas, especially among small cities and towns which used to serve the now depleted rural populations.¹

The second flow creates even more complex problems for the central city and political units in its fringe areas. These population flows, both rural-urban and urban-suburban, baffle local political decision-makers with problems which

¹Professor Dwight A. Nesmith of Kansas State University explores the ramifications of rural out-migration for local governments in the agricultural Mid-West. Nesmith's position, stated harshly but concisely, is that the diminished populations in rural service centers will not support the existing retail trade and service establishments. In addition, the decreasing tax base and tax revenues must support essential public services which, if they are to be adequate, must be provided at increasing cost and complexity. The small rural town just can't surmount these problems alone. "The Small Rural Town," A Place to Live, U. S. Department of Agriculture Yearbook (Wash. D.C.: GPO, 1963); also see Richard Pollay, "The Death of the Small Town: Some Comments on Causes and Cures," Kansas Business Review (April, 1967), 3-9.

simply ignore legal niceties such as the official boundaries of cities, towns, counties, and states. Both public and private decision-makers are becoming aware of the need to engage in co-operative problem-solving across existing jurisdictional lines.

The complexities facing rural and urban governments are complicated further by the increasing specialization of the American economy and its concomitant geographic specialization. Geographic areas specialize in and export those products which they can produce most efficiently and cheaply. Industrial complexes cluster into massive, spatial agglomerations tied to each other by inter-industrial linkages. Economic specialization, in order to be successful, requires intensive and extensive interdependence of all the geographic and industrial units which make up a complex, modern economy. The intricate networks of a specialized economy do not abate at local political boundaries nor can local political authorities prevent economic relocations and shifts of functions within this specialized economy. Capital and labor tend to move from geographic areas of low potential to other areas having more profitable or desirable opportunities.¹

¹Economist Edgar M. Hoover has analyzed the cumulative effects of locational changes in geographically specialized economic activity upon the local economy and the local government. Inter-industrial linkages can create intensified (multiplier) depressive effects when a basic industrial activity relocates outside the area. The Location of Economic Activity (New York: McGraw-Hill Book Co., Inc., 1948), Chapter 9.

A new political unit, larger than the county but smaller than the state, seems, at first glance, to be a logical solution to the problems which overlap existing political boundaries. However, attempts to create regional governments have met with intense political resistance and scant success. The regional planning agency appears, in retrospect, to be a sort of compromise between the autonomous, resource poor, local government, facing problems beyond its fiscal and administrative abilities, and the regional government, equipped with the aggregated political, administrative and fiscal abilities necessary to handle complex regional problems.

C. Political Reactions to the Regionalization Process.

Attempts to adjust local political and administrative boundaries to the current socio-economic realities of American life have generally been advocated most forcefully by the federal agencies, resisted strongly by local governments and local office-holders, and, in many cases, ignored by state governments.

Prior to World War II, the use of regions as planning units for functional purposes in the United States was confined primarily to federally supported surveys of water and land resources coupled with plans for their eventual use and development. After the War, federal attention gradually shifted to the metropolitan planning region as the Congress

began to react to the stresses created by rapid urbanization.

Population concentrations produced enormous congestion problems and increased demand for services by urban residents. Improvements in transportation and technology, coupled with increasing per capita incomes, allowed the urban residents and new industries to flee the congested heart of the city; i. e., suburbanization and industrial de-centralization. Suburbanization and retail de-centralization (the suburban shopping centers) created overlapping interests and direct political conflicts between the central city and the political units in the city's immediate hinterland areas. The central city needed to expand and recover its lost tax resources to meet the ever-increasing service and welfare demands of its citizens. Suburban cities fought this expansion and threats to their autonomy by effectively evoking the constitutional and statutory restrictions imposed upon cities by rural dominated state legislatures.

Industrial decentralization, coupled with business expansion, especially in the South and Southwest, aroused a competitive spirit among state governments anxious to share in the new wealth and new employment brought into a state by industrial growth. State agencies sponsored research into the developmental potentials and resources of their various resource regions. Industrial development and pro-

motion programs became a characteristic function of state governments.¹

During the 1960's, a discernible shift occurred in the economic development programs at the state level. This was due, in part, to newly enacted federal programs aimed at bringing depressed areas of the United States back into the mainstream of the American economy. A belief was also gathering strength among governmental reform movements that existing local government units had inadequate geographic boundaries and inadequate resource bases to provide essential public services. Small local units simply could not plan or effectuate a comprehensive economic development program. Obviously, current political, social and economic relationships did not coincide with the 19th century political boundaries. Development regions needed to be delineated which would encompass the major economic, social and political forces thought to be required for an unified, comprehensive approach to development.

D. Sub-State Regional Delineation: A Policy Tool for State Planning.

Pressures for co-operative action by local governments and corresponding needs to co-ordinate divergent federal

¹John Friedmann, "The Concept of a Planning Region," Regional Development and Planning, ed. John Friedmann and William Alonso (Cambridge: MIT Press, 1964), pp. 498-99.

development programs have been forcing the state governments to take, at least, an active interest concerning the proliferation of federal-local regional planning agencies. Congress has presented the states with the opportunity to undertake a major role in the regional delineation process. The states have the chance to co-ordinate the growth and spatial organization of their internal development regions.

Indications are that state administrations are currently under pressures to delineate sub-state regions from all three levels of government: local, state and federal. Table I (page 10) presents findings on this subject from an interview survey of twelve state planning directors undertaken by the author during the summer of 1967.¹

Pressures from federal agencies on state governments to regionalize were felt to be exceptionally strong by Mid-West and Southern planning officials. Northeastern planners apparently realized the need for co-ordinated state and regional planning prior to the recent outpouring of federal programs. Table I would appear to indicate that the state governments,

¹The survey was financed by a thesis travel grant received by K.S.U. and awarded to the author from the National Foundation of Fine Arts and Humanities. The author interviewed twelve eligible interviewees; i. e., directors or assistant directors of state planning agencies. The interviewed officials were from Arkansas, Connecticut, Georgia, Kansas, Missouri, New Hampshire, Ohio, Pennsylvania, Tennessee, Vermont, West Virginia, and Wisconsin. See Appendix I for the interview questionnaire.

TABLE 1

PRESSURES UPON STATE GOVERNMENTS TO DELINEATE REGIONS

Question: What was the major reason that induced your agency to undertake a delineation of the state's regions when you did?	Replies from Directors in			
	Mid-West	South	Northeast	Total
A. The state initiated the process to help co-ordinate state programs	1	0	4	5
B. Reaction to, or attempts to meet, federal aid requirements	1	3	1	5
C. Pressures from private development groups	0	1	1	2
D. No definite answer	1	0	0	1

Question: Is the current emphasis on regional planning in your state mainly the result of the pressures from: (Please rank in order of importance)	How Directors ranked them in			Over-All Rank
	Mid-West	South	Northeast	
A. State efforts to achieve some basic co-ordination in its overall development programs	2	1.5	1	1
B. Federal grant-in-aid programs which require some form of regional planning or area-wide functional planning	1	1.5	2	2
C. Local cities having expansion and growth problems	3	3	3	3

* Mid-West States = Kansas, Missouri, Wisconsin.
Southern States = Arkansas, Georgia, Tennessee, West Virginia.
Northeastern States = Connecticut, New Hampshire, Pennsylvania, Vermont.

in general, are more attuned to federal pressures than they are to the demands from metropolitan areas seeking answers to their growth problems.¹ Some of the strongest pressures for delineation apparently are derived from the desire of state agencies themselves to bring some rational co-ordination into state government programs.

In discussing these pressures, Mid-Western planners expressed concern about the calamitous growth of federally supported, often overlapping, programs. In many cases, overlapping planning units were in direct conflict with each other. An urgent need was expressed that the state should try to co-ordinate or impose some rational, spatial order upon the regional planning agencies. Southern planners seemed most anxious to get the required regions delineated for the Appalachian Development and the Economic Development Programs. Their cardinal objective was to increase the flow of federal development funds into severely depressed areas of their states. Northeastern planners, in general, looked upon the regions and their delineation as a vital management tool useful in the state's administrative efforts to insure a comprehensive and co-ordinated economic and physical development of the entire state.

State planners, under these diverse pressures to help

¹Roscoe C. Martin, The Cities and the Federal System (New York: Atherton Press, 1965), pp. 75-76. This study documents the lack of concern by state governments for major metropolitan problems.

ameliorate the problems associated with the regionalization process, have evolved logical arguments to support their contention that the state should take a leading and co-ordinative role in delineating sub-state regions.

The American Institute of Planners and the Office of Regional Development Planning, U. S. Department of Commerce, undertook a survey of regional districting efforts in all fifty states in 1966. This survey of regional planning agencies revealed two basic purposes motivating state agencies to set up sub-state regional groupings:

"It is recognized this [regional districting and problem solving] is best accomplished as part of state planning to assure that all areas of the state are covered and that areas approximate as closely as possible the functional economic regions that will best facilitate governmental decisions that must be made on a regional basis."¹

The expected benefits to state planning from control over the sub-state delineation process is clearly expressed in the following memorandum from the State Planning Director of North Dakota to his Governor:

"1. Select regions within the state to bridge the gap between statewide and purely local concerns. There is presently no overall framework to co-ordinate statewide development and operations with a particular community development proposal. This would be more feasible if county and community problems were aggregated at a regional level.

¹American Institute of Planners, Survey of Areawide Planning Activity, A Draft Report (Wash. D. C.: American Institute of Planners, May, 1967).

2. Create regions in such a manner that future development district schemes of various federal agencies will be applicable to these regions . . . Without a common set of districts, it is entirely possible that overlapping sets of districts will be created by the various agencies in such a manner as to nullify well intended programs' impact on other all-state developments . . . With the creation of locally created regional districts, it would be more plausible to cut down the expense of future local planning administrative costs and more effectively utilize data obtained from the State Development Plan and other state and federal sources."¹

E. A Challenge and An Opportunity for State Planning Agencies to React Positively to the Regionalization Process: The Confusion and Proliferation of Federal Regional Development Programs.

The federal urban and economic development monies currently being offered to state and local governments are vast but the different program requirements are frequently overwhelming and complex. These program requirements often camouflage contradictory objectives. Many of the grant programs call for area-wide comprehensive plans prior to project allocations, or for the setting up of regional or metropolitan planning agencies prerequisite to federal funding.

Congress, since 1960, has increasingly provided, in federal statutes, an opportunity for the state governments to take a creative role in regional delineation, development,

¹Memorandum from James M. Lyons, Senior Planner, Economic Development Commission, State of North Dakota, to Governor William L. Guy, "Regional Planning in North Dakota," dated October, 1966.

and planning. However, if the state governments fail to undertake the challenge, federal agencies can create their own delineations in concert with diverse local governmental units. The creation of single purpose regions by each of these semi-autonomous federal agencies for their own specialized interests soon results in a proliferation of regions. Many of these regions are overlapping and they compete against each other for funds, staff and the attention of local governments.

Basically, three federal programs have been instrumental in getting state governments involved in the process of regional delineation and planning. The first and oldest program is contained in Section 701 of the Housing Act of 1954, as amended. Section 701 funds, called Urban Planning Assistance, are administered by the U. S. Department of Housing and Urban Development (HUD). This program offers a grant totaling two-thirds of the cost of preparing community, county, metropolitan, regional and state-wide comprehensive development plans.¹ HUD, through its 701 program, has encouraged state planning agencies to divide their respective states into some rational system of planning regions.

A more recent federal act, one that has given birth to a large number of regional planning agencies, is the Public

¹U. S., Department of Housing and Urban Development, Programs of the Department of Housing and Urban Development (Wash., D. C.: GPO, Nov., 1965), p. 4.

Works and Economic Development Act.¹ Section 403 of the Act calls for the delineation of viable economic development districts (EDD) and the organization and staffing of regional planning agencies to serve these districts. The EDDs must have at least two or more redevelopment areas (high unemployment areas, low family income areas, and Indian reservations) and one "economic development center" (an urban growth center under 25,000 population). The economic development center must be --

" . . . geographically and economically so related to the district that its economic growth may reasonably be expected to contribute significantly to the alleviation of distress in the redevelopment areas of the district, . . ."²

The states are presented with an opportunity to guide the delineation and location of these EDDs in two ways:

(1) EDDs are to be designated ". . . with the concurrence of the States in which each district will be wholly or partially located . . ." and (2) economic development centers must be ". . . recommended by the State or States affected for such special designation: . . ."³ Several states have recently undertaken delineation programs in order to exert their influence on the implementation of the Act. As of July 1, 1967,

¹U. S. Congress, Public Works and Economic Development Act of 1965, Public Law 89-136, 89th Cong., 1st Session, 1965.

²Ibid., p. 11.

³Ibid.

24 EDDs had been officially designated and another 70 EDDs were in the process of being set up. Twenty-two state planning agencies had received planning grants from the Economic Development Administration to assist them in their regional delineations.¹

A third program which affects a select number of states (those 12 states containing portions of the Appalachian Mountain chain) is the Appalachian Regional Development Act of 1965.² Section 301 of the Act calls for the creation of Local Development Districts (LDDs) composed of a county or counties and parts of other political subdivisions within the Appalachian Region. Based on this statute, some very small LDDs might be developed. However, a progressive state planning agency with a well-designed, rational delineation program could control the proliferation of LDDs with inadequate resource bases for development. No LDD will be approved by the joint, federal-state, Appalachian Regional Commission unless it is certified by ". . . the Governor of the State or States in which such entity is located, or by the State

¹Ross D. Davis, Assistant Secretary of Commerce for Economic Development, Economic Development Administration, "The Federal System and Economic Development: The Role of State Planning," A paper read before the meeting of the Council of State Planning Agencies, Lexington, Kentucky, August 8, 1967.

²U. S. Congress, Appalachian Regional Development Act of 1965, Public Law 89-4, 89th Cong., 1st Session, March 9, 1965.

Officer designated by the appropriate State law to make such certification, . . ."¹

All three of the statutes were written with the expectation that some state agency (preferably the state planning office) would undertake its own delineation of appropriate sub-state regions or districts which, in turn, could be utilized by the federal agencies. However, many states have been less than enthusiastic about preparing a rational delineation of regions within their jurisdictions. Therefore, we find ad hoc, federal-local districts continually springing up which are not co-ordinated with, nor understood by, the state governments.

This growth and overlapping of jurisdictions in federally assisted, regional planning programs has become so confused that even the federal administration has expressed concern. President Johnson felt it necessary to send out a special White House Memorandum to the Secretarys of Commerce, HEW, HUD, Interior, Agriculture, OEO, the Appalachian Regional Commission and the Bureau of the Budget. The Memorandum states in part:

"Comprehensive planning covering wide areas is a promising and extremely important beginning to the solution of critical state, metropolitan, and regional problems. It is essential that it be done well. . .

¹Ibid., p. 14.

At the federal level, we must co-ordinate our efforts to prevent conflict and duplication among federally-assisted comprehensive planning efforts. . .

Boundaries for planning and development districts assisted by the Federal government should be the same and should be consistent with established State planning districts and regions. Exceptions should be made only where there is clear justification."¹

The close federal - state co-operation called for in the Memorandum states the ideal case. Already federal legislation has been passed which seems destined to further confuse the regional planning issue and to encourage the proliferation of additional federal - local districts. Section 204 of the Demonstration Cities and Metropolitan Development Act of 1966² requires that all requests by cities for federal assistance programs such as open-space, hospitals, airports, libraries, water supply and distribution, sewage and waste treatment, highways, transportation facilities, water development and land conservation, must be reviewed by a regional planning agency to assure co-ordination of local developments within a metropolitan area. This area-wide review agency is to be designated by the Secretary of the U. S. Department of Housing and Urban Development.

A careful reading of Section 208 (7) leaves the impression that area-wide review agencies could be designated

¹U. S., President, (1963 -) (Johnson) "Memorandum From the President on Co-ordination for Development Planning", Office of the White House Press Secretary, September 2, 1966. Underlines are mine.

²Demonstration Cities and Metropolitan Development Act of 1966, in U. S., Statutes at Large, LXXX, 1255.

by the Secretary without the approval or suggestion of the state governments.¹

Another prospective federal program promises to give birth to additional demands for regional delineations. This program evolved from the Community Development District Act of 1966 proposed in Congress by the United States Department of Agriculture. The main thrust of the Act was to provide funds for comprehensive area-wide planning in rural areas. Drafters of the Act conceived of their Community Development Districts (CDDs) as multi-county units which would have one or more urban service centers within a convenient commuting distance of surrounding rural areas.²

Congressional resistance to the proposed Act induced the Department of Agriculture to attempt a new approach. The revised strategy includes a coalition with the Department of Housing and Urban Renewal and an amendment to the Section "701" planning program. The amendment would authorize the creation of Rural Area Development Districts (RADDs). These rural planning regions would be approved jointly by the

¹A 1967 Amendment to the Act makes the Director of the U. S. Bureau of the Budget the official designator of Area-wide agencies. This may be a hopeful note because of the fact that the Bureau has recently led Federal efforts at coordinating Federal programs and State regions.

²State of Kansas, Kansas Department of Economic Development, Planning Division, Regional Delineation for Kansas, Prepared by the Center for Community Planning Services, Kansas State University (Topeka, 1966), p. 7.

Secretarys of HUD and USDA. In the proposed amendment, the State would be called upon to designate the location and boundaries of these rural districts. Planning money would be made available to the state governments to assist in the delineation program.¹

F. The Dilemma Posed by the Regionalization Process for State Planning.

The continued proliferation of regions and regional planning agencies, in reaction to the regionalization forces, seems inevitable. The state planners in the author's interview sample were acutely aware of this fact. Seven of the twelve state planning directors estimated that their entire states would be completely divided into multi-county planning regions within a period of five years or less.

Demands and pressures generated by the federal development programs weighted most heavily in the directors' estimations. The successes of existing regional agencies in obtaining funds and the rapid pace of urbanization were considered strong inducements to regional proliferation. If these state planning officials are correct in their estimations, the southern states will soon be divided into regions

¹Andrew S. Bullis, Assistant Director, Office of Intergovernmental Relations, HUD, "Regional General Government," Speech given before the meeting of the Council of State Planning Agencies, Lexington, Kentucky, August 8, 1967. Also see U. S., President (1963 -) (Johnson) Message to the Congress: Recommendations on Urban and Rural Poverty, March 15, 1967. 90th Cong., 1st Sess., (Wash., D. C.: GPO, 1967), p. 15.

TABLE 2

'STATE PLANNING DIRECTORS' VIEWS CONCERNING THE GROWTH OF
REGIONAL PLANNING AGENCIES

Question: Could you give me an educated guess as to the length of time it will take before your state will be completely divided into active, multi-county, regional planning agencies?	Replies from Directors in			
	Mid-West	South	Northeast	Total
A. Complete now	0	1	0	1
B. 1-2 years	0	1	3	4
C. 3-5 years	0	2	0	2
D. 10 years	1	0	0	1
E. Don't know	2	0	2	4

followed shortly by the northeastern states. Mid-Western planners do not foresee a complete regional delineation of their states in the near future.

If this exuberant growth of regional planning agencies does occur during the next five years, the demand for competent regional planners is likely to be doubled or tripled. Manpower shortages are already critical in the field and the planning schools are not meeting the existing demands for new graduates.

In addition to an increase in their numbers, state planners also foresee a greatly enlarged role evolving for the regional planning agency.

TABLE 3

STATE PLANNING DIRECTORS' PROJECTIONS ABOUT THE FUTURE OF
REGIONAL PLANNING

Question: What trends or what emerging patterns do you think will occur in regional planning in your state in the near future?	Directors who saw this
A. Regional planning will become stronger because:	
1) The growing strength and general acceptance of regions; the coming of some form of modified regional government.	9
2) The growth of an independent regional unit; Federal-regional ties will become stronger, the regions will become independent of state planning offices, and the regions will develop their own political power bases.	9
3) State governments will come to accept regions as basic units for state programs.	6
B. Regional planning will expand its scope and functions:	
1) Regions will tend to be headed by some form of Council of Governments.	3
2) Economic development functions will increase.	3
3) Increased activity in:	
(a) Water resource planning	1
(b) Staff assistance to local governments	1
(c) Interstate planning around SMSAs	1

While state planning directors as a group look favorably upon a stronger role for regional planning, some fears were expressed about the increasing political power of the planning region. Some planning directors fear that state govern-

ment will gradually lose control over state created regional organizations. Others were concerned about the multiplication of federal-local regions without any state guidance or control. The growth of politically powerful regional units cannot be prevented by state government but the state does have an opportunity to become an intimate partner in this growth.

A state administration that does not undertake some positive effort to co-ordinate or delineate rational regions within its own boundaries may well find itself inundated by regional planning entities vying among themselves and bitterly competing for the financial assistance and special attention of state government. The 1966 survey of regional planning units conducted by the American Institute of Planners revealed the extent to which regional delineation had already gone in the United States, with or without the assistance or guidance of state government. In brief:

1. Twenty six states had defined 259 sub-state regions.
2. Eight hundred and fifty eight counties in 45 states had formal planning activities.
3. Twenty five councils of elected officials had been formed in 22 states.
4. One hundred and two areawide planning agencies existed in 34 states (multi-county organizations).¹

¹American Institute of Planners, Survey of Areawide State Planning, A Draft Report.

In a similar but more recent effort, this author sent letters to state agencies officially designated to do state planning in all fifty states. The letter asked each agency if their state government had actuated a delineation program for the state, the number and location of their sub-state regions, the criteria utilized in the delineation process, and the purposes for which the regions were created. Only four out of the fifty states failed to reply. Of the remainder, twenty six states had delineated sub-state regions and eight others were actively engaged in the process of delineation.¹

The AIP survey and the author's survey indicates that the regional delineation challenge has been undertaken by about half of the state capitols. However, the reluctance of state governments to take an active role can be sensed from the newness of their delineation efforts. In the author's survey, seventeen of the 26 states delineation documents received had specific dates for their completion. These dates ranged over a decade from 1957 to 1967. Their modal date was 1966, the median date was 1966, and the average date was 1965.

¹Four of the states that failed to answer the author's letters were listed as states having regions in the American Institute of Planners survey. Thus 29 states appear to have delineated regions as of 1 August 1967. See Appendix II for a comparison of the AIP survey and the author's survey.

This thesis has sought to understand the regionalization process as an historically evolved, socio-economic phenomenon which has had significant implications for political and administrative units at all levels of American government. Necessary political adjustments to these socio-economic changes have usually exhibited a time lag between the perception of a new problem and the adoption of a suitable solution. The thesis will now examine the position and abilities of the state governments to improve political reaction time to the changes created by the regionalization process. The thesis will follow the state planning office as it undertakes a sub-state, regional delineation program in order to adjust existing political and administrative boundaries to new socio-economic realities.

For the purposes of the study, the author will assume the role of a state planning director as he explores the types of regions available for potential use in his delineations, defines the purposes for which these regional planning units are being created, and selects a suitable region-type for these purposes. Chapter 5 will cover the various problems state planners might meet and the strategies they might use in their efforts to implement their proposed regional delineations.

CHAPTER II

A REVIEW OF THEORETICAL REGION-TYPES AVAILABLE TO STATE PLANNERS

A. Starting the Sub-State Regional Delineation Program.

Assuming that a state government makes the decision to accept the challenges posed by the regionalization process, a logical first step would be to delineate some rational, state-wide system of regions. Hopefully, this standardized system of regions would eliminate numerous problems caused by overlapping planning jurisdictions. The thesis will explore this delineation program as a step-by-step process through which the state planner must go in arriving at his final sub-state regions. The entire process is regarded in this study from the viewpoint of the state planning director. The state planner would first examine the literature on regions in order to discover what alternatives might be available for use in his own delineation program.

B. The Morphology of Regions.

The term region has been used independently by geographers, geologists, economists, ecologists, sociologists, political scientists, administrators and planners. Each profession has defined regions to fit its own specialized purposes. However, by ignoring for the moment the differing purposes for which regions are conceived, one can detect certain basic structures and forms.

Structurally, three basic forms or region-types can be found in the literature: (1) the uniform or homogeneous region, (2) the nodal region, and (3) the administrative region. Each of these three region-types requires a different conceptual approach in its delineation.

1. The Uniform or Homogeneous Region.

The homogeneous region represents an area within which the variation or co-variation of one or more selected characteristics falls within a pre-determined range about some norm or standard. These characteristics may be physical, economic or social. In many cases, the homogeneous region is found through a statistical index which measures, over a wide range of criteria, the degree of uniformity within the geographic areas comprising the region as opposed to exogenous areas outside the selected region.

For uniform regions, boundaries are drawn where the distinctive, homogeneous characteristics of adjacent regions become least discernible and begin to fade into each other. The critical task is to select the characteristics which will be utilized for delineation purposes. Various statistical techniques such as correlation and variance analysis have been used to differentiate uniform regions.¹ Correlation analysis is also used to find significant variables. Correlation

¹Peter Haggett, Locational Analysis in Human Geography (London: Edward Arnold Ltd., 1965), p. 247.

techniques bring out key variables or characteristics which in turn account for numerous variations in a much larger number of dependent economic and social variables. Factor analysis does approximately the same thing.¹

The earliest studies of uniform regions in the United States defined economic regions on the basis of variation in natural environment; either climatic or physiographic. Later, geographers attempted to delineate regions based on the concentration of production in agriculture and manufacturing.² Most recently, geographers and sociologists have defined multi-variable regions which they feel exhibit a community of interest effect.³

A good example of a statistical delineation technique is found in Donald Bogue's creation of state economic areas for the United States.⁴ His economic areas were contiguous geographic regions aggregated by their homogeneity on 88 variables,

¹Walter Isard, Methods of Regional Analysis (New York: MIT Press, 1960), p. 293.

²For examples see: Oliver E. Baker, "Agricultural Regions of North America," Economic Geography, II (1926), 459-93 and Richard Hartshorne, "A New Map of the Manufacturing Belt of North America," Economic Geography, XII (1936), 45-53.

³Howard Odum, Southern Regions of the United States (Chapel Hill: University of North Carolina Press, 1936) and M. J. Hargood, N. Danilevsky, and Corlin O. Beum, "An Examination of the Use of Factor Analysis in the Problem of Subregional Delineation," Rural Sociology, VI (1941), 216-33.

⁴Donald J. Bogue, State Economic Areas (Wash., D. C., Bureau of the Census, 1951).

in the case of non-agricultural regions, and by 76 variables for agricultural regions. Bogue used a form of variance analysis. Deviations from the arithmetic means of assorted sets of variables were squared and summed for each proposed economic area. The summed variations had to be smaller intra-regionally than inter-regionally.

2. The Nodal Region.

The nodal region is based on the premise that individuals and groups, or firms and industrial complexes, perform a series of functions or interactions over space. The friction of distance will decrease both the intensity and volume of these interactions as one goes progressively further from the central location point of the individual or firm. Where these interactions reach a point of little or minimal activity, a boundary line can be drawn. As the number of individuals and firms concentrate at any one geographic point, the separate individual zones of interaction tend to overlap and to coincide to a great extent. Thus the concept of an aggregated zone of many interactions, extending out from a central, geographic node and diminishing with the friction of distance, becomes readily apparent.

This central node is the organization point. Commonly, it is the communications and transport center of the region. The areas in the region are linked to the central node by an inter-meshing circulation pattern; physical, economic and social. Most authors consider this central node to be urban:

"Cities may be considered as centers of economic development. They affect economic patterns in the areas over which their influence extends, and, at the same time, they are affected by the growth which surrounds them. No effective regional plans can be done . . . without considering the role of the cities, without considering the core of economic progress."¹

Johann von Thunen (1783-1850), a German farmer and scholar, is generally credited with first presenting the nodal-hinterland concept in a written, theoretical form. Von Thunen found the concept useful in explaining the locational patterns of agricultural activities around urban market centers. Von Thunen's basic principle was: the number of profitable agricultural options decreases with distance from urban markets.

Von Thunen's Formula: $P = V - (E + T)$
 where: P = Profit
 V = Value of Product at Market
 E = Cost of Producing the Product
 T = Transportation Costs

Von Thunen postulated six concentric zones of agricultural land uses around market cities, each zone was best suited for a distinctive crop or product; i. e., easily perishable products such as milk and vegetables were produced in the first ring because they needed rapid access to the urban markets whereas cattle were raised in the sixth ring because they could be herded over long distances to markets without decreasing their value.²

¹Friedmann, p. 500.

²John Alexander, Economic Geography (Englewood Cliffs: Prentice-Hall, Inc., 1963), p. 613.

Another and more controversial theory has been advanced to explain the attraction of major urban centers upon their surrounding hinterlands and upon smaller cities within this hinterland. This theory is known as the gravity model, or by some authors, the interaction theory. In the gravity concept, the strength of economic and social ties between two urban centers varies positively with their size and negatively with their intervening distance:

$$\text{The Gravity Model: } i = \frac{P_1 P_2}{d}$$

where: i = degree of interaction
 P_1 = Population of the Larger City
 P_2 = Population of the Smaller City
 d = The Distance between P_1 and P_2

This model is analogous to Issac Newton's Law of Gravity (1686) which postulates that the gravitational forces which act between two bodies in space are in direct proportion to the mass of the two bodies and in inverse proportion to the square of the distance between the bodies.¹ Case studies using the gravity model show a remarkable predictive power in certain aspects of inter-city activity such as telephone messages, bus passenger records, newspaper circulation routes, bank checks, etc.² However, further testing of

¹U. S., Bureau of Public Roads, Calibrating and Testing a Gravity Model for Any Size Urban Area (Wash., D. C., GPO, 1965), p. II-1.

²Arguments for the model are found in W. J. Reilly, The Law of Retail Gravitation (New York: Fillsburg Publishers, 1953) and in G. K. Zipf, Human Behavior and the Principle of Least Effort (Cambridge: Addison-Wesley Press, 1949).

the model has produced contradictory evidence.¹

Those persons who accept the gravity model in their research must answer a perplexing question. What is the approximate exponent value for the distance factor in their formula? Current research indicates that the effect of distance is not uniform over space, nor do interactions uniformly decrease with distance. Distance in recent models is generally raised to some power other than unity. One study found the exponent of distance to be 2.0; another study arrived at 2.8.² More exhaustive and sophisticated studies have reported that the distance exponent varies according to trip purpose of the individual traveler between two points.³ Distance seems to be a variable exponent related intimately to trip purpose and actual travel time: the "over the road" time.⁴

By far the most significant work being done on nodal regions today conceptualizes the central urban node as a

¹The gravity model apparently does not apply to some interactions between cities - see Edward L. Ullman, "The Role of Transportation as the Basis for Interaction," Man's Role in Changing the Face of the Earth, ed. W. L. Thomas (Chicago: University of Chicago Press, 1956), p. 871.

²J. D. Carroll, "Spatial Interactions and the Urban-Metropolitan Description," Traffic Quarterly (April, 1955).

³A. M. Voorhees and R. Morris, Estimating and Forecasting Travel for Baltimore by Use of A Mathematical Model, Bulletin 224 (Wash. D. C.: Highway Research Board, 1959), pp. 105-114.

⁴U. S. Bureau of Public Roads, p. II-4.

service agent for a dependent hinterland. Under this approach, the city is viewed as a nuclei of specialized activities which are spatially concentrated at the node and functionally associated. Each of the city's central functions (activities or interactions) has its own set of associations with various adjacent areas outside the city proper and with smaller, dependent urban places in the surrounding hinterlands. The boundaries of the central city's hinterlands are usually defined by establishing a composite border based on the mean spatial ranges of several central place functions. Some studies take a single variable as being representative of the multi-dimensional associations between the city and its regions.¹

A vexing problem one must face in using the central city - hinterland concept is contained in the classification procedure

¹The multi-factor approach is advocated by the British geographer, Robert E. Dickinson in his recent City and Region (London: Routledge and Kegan Paul, Ltd., 1964). Composite boundaries, adjusted for existing political boundaries, are used by the U. S. Bureau of Census to delineate SMSAs, Standard Metropolitan Statistical Areas: Census of Population, 1960 (Wash., D. C., GPO, 1961). SMSAs have central cities, 50,000 population or more, which are bound to contiguous hinterlands by economic interdependencies; such as workers' commuting patterns, telephone calls, newspaper circulations, etc. A single factor approach is used by the U. S. Department of Labor which delineates labor market areas based upon central cities and surrounding territories which are within a reasonable workers' commuting distance: Bureau of Employment Security, Directory of Important Labor Market Areas, Supplement No. 8 (July 31, 1963).

by which one city is classified independent, the central node, and other cities and areas are determined to be dependent upon this city. Theoretical and empirical efforts, either to establish a hierarchy of cities, or to generate economic hypotheses to explain perceived spatial regularities and sizings among cities, can be generally classified under central place studies. Walter Christaller laid the foundations for central place theory in 1933 when he sought to find some general principles governing the size, number and distribution of cities in southern Germany.¹ Economist August Losch added his concept of the ideal economic region. Losch concluded that hexagonal trading areas surrounding central cities were, theoretically, the more efficient economic shape as opposed to circular hinterlands.²

Christaller, Losch and more recently, Berry³ have sought to derive a spatial order and hierarchy of cities, each order of city having a corresponding market area size or hinterland. The cities in each order perform a series of functions for their hinterlands. Each city order is characterized by differences

¹Walter Christaller, Die zentralen Orte in Sudddeutschland (Jena: Gustave F. Verlage, 1933).

²August Losch, The Economics of Location (New Haven: Yale University Press, 1954) and "The Nature of Economic Regions," Southern Economic Journal, XXIX (August, 1963).

³Brian J. L. Berry and Allen Pred, Central Place Studies (Philadelphia: Regional Science Research Institute, 1961).

in population size. The larger city-orders have certain advantages produced by economies of scale; i.e., lower costs and larger markets associated with the specialization and agglomeration of economic, social and political functions. High order cities have extensive market areas which, in many cases, completely enclose the smaller market areas of lower-order cities. These encircled lower-order cities are thus "nested" within the central cities' influence radius and dependent upon the central cities for various specialized functions.

Numerous empirical studies undertaken by Brian J. L. Berry and his co-workers have generated certain modifications of Christaller's original central place theory.¹ Christaller's concept of a hierarchical order of cities has been retained but assumptions of uniformity concerning population base and trade areas have been relaxed. Berry ranks central places by specialized central functions instead of population size (although the number of functions and population size are closely correlated). Trade area size is directly related to the number and variety of central functions contained in the central city.

¹Brian J. L. Berry and William L. Garrison, "The Functional Basis of the Central Place Hierarchy," Economic Geography, XXXIV (April, 1958), 145-54; Brian J. L. Berry and William L. Garrison, "Recent Developments in Central Place Theory," Papers and Proceedings of the Regional Science Association, IV (1958), 107-20; Brian J. L. Berry, H. Gardiner Barnum, and Robert J. Tennent, "Retail Location and Consumer Behavior," Papers and Proceedings of the Regional Science Association, IX (1962), 65-106; H. Gardiner Barnum, Market Centers and Hinterlands in Baden-Wurtemberg (Chicago: University of Chicago Press, 1966).

Brian Berry and his co-workers are associated with two major additions to central place theory: range and threshold. Range signifies the maximum market area of a specific good or service; i. e., the distance that people are willing to travel to the center in order to obtain the specific good or service. Threshold represents the minimum market size (minimum demand is translated into the purchasing power of a population over a specific geographic space) which is required before a central place is able to sell or provide a higher order good or service.

3. The Administrative or Minimum Standard Region.

The administrative region is more arbitrarily conceived than the previously discussed region-types. The administrative or minimum standard region is constructed around some demographic, social, economic, physiographic or administrative standard or standards selected by the delineator. Usually this standard is stated in one of two ways; either (a) the region must contain at least X degrees of characteristic Z, or (b) the region must not exceed XX degrees of characteristic H. For example, the region must have, at the minimum, a 200,000 population base or, the region must not exceed, at the maximum, a total area of 2,500 square miles, etc.

In general, administrative regions are related to "span of control" limitations or adequate resource base considerations. Identifiability of the selected regions with existing political

institutions is often required. While the administrative region will probably not coincide with either an economic or a social "region" (however they might be defined), the use of aggregated political units insures that data for analysis and administrative decision-making will be available from existing sources.

If a region is being created by the delineator for policy-making purposes, the effectuating of future policy decisions will depend, to a large extent, on the relationship of the new region to existing political structures. Many of the theoretically "purer" regions, i. e., nodal or uniform regions, have been compromised, in practice, into some modified form of administrative region in order to enhance data availability and prospects for policy implementation.

CHAPTER III

THE MAJOR PURPOSES OF REGIONAL PLANNING FROM THE VIEWPOINT OF
STATE PLANNING DIRECTORS: IMPLICATIONS FOR REGIONAL STRUCTURINGA. The State Planner and the Multi-Purpose Planning Region.

The second step in the delineation process is to determine the major purposes for which the sub-state regions are to be created. The state planner, first and foremost, must consider the goals and purposes which his regions will serve. He must carefully examine these purposes because they will be critical factors in determining both the size and character of his regions. Any criteria utilized in delineating the region must have relevance to the region's major purposes:

". . . to have human significance, the region must be so defined as to seek to achieve human purposes within the limitations of physical constraints. Physical constraints alone are insufficient to shape a region in such a way as to give it political significance."¹

The underlying parameters or purposes of regional planning are a point of contention, both in the writings of planning theorists and among planning practitioners. Consensus as to the meaning of "planning", much less "regional planning", has yet to be reached by those engaged in the profession of planning. Therefore it becomes necessary for the state planner

¹Norton E. Long, "Political Process and Feasibility of Regional Development," Research and Education for Regional and Area Development, Center for Agricultural and Economic Development (Ames: Iowa State University Press, 1966), p. 121.

to operationalize the concept, "major purposes of regional planning". For the purposes of this thesis, the determination of major planning purposes will be derived from the experiences of state planning directors in the author's interview sample.

B. Regional Planning As Seen By State Planning Directors: What Is And What Ought To Be.

In 1957, Harvey Perloff saw regional planning as basically "development" planning: the development and management of water, land and natural resources; the development of metropolitan areas, and functional planning having a regional scope such as transportation planning and economic development.¹ Under the impact of recent federal programs, the scope of developmental regional planning has been expanded and new social planning functions have been added to it.

Unfortunately from the viewpoint of integrated comprehensive planning, existing regional planning operations have had a tendency to be functionally specialized or problem oriented. The funds supporting regional planning efforts are provided, in large measure, by federal or state agencies seeking solu-

¹Harvey S. Perloff, Education For Planning (Baltimore: John Hopkins Press, 1957), p. 67. John Friedmann generally concurs with Perloff's assessment but he adds two additional regional policy concerns: (1) the solution of problems associated with rural settlement patterns, and (2) efforts to influence national policies which have direct regional impacts. See "Focus on Public Policy," Research and Education For Regional and Area Development, pp. 215-18.

tions to specific problems. Concentration upon overall goals and comprehensive regional planning have taken a secondary role in current areawide planning projects. A recent study of 143 cities involved in areawide planning projects illustrates this point. Only 6.5 percent of the 491 projects surveyed were concerned with overall comprehensive plans.¹

TABLE 4
A SURVEY OF AREAWIDE PLANNING PROJECTS (491 PROJECTS)
UNDERTAKEN BY 143 CITIES IN 1966

Type of Area-wide Planning Project	Percent of Total
1. Transportation	19.0
2. Civil Defense	13.5
3. Water Pollution Control	13.0
4. Land Use	13.0
5. Water Resources and Flood Control	12.5
6. Parks and Open Spaces	11.0
7. Miscellaneous	9.0
8. General (Comprehensive)	6.5
9. Air Pollution	2.5
Total	<u>100.0</u>

In the author's interview of state planning directors, they were asked to list the major functions currently being carried out by existing regional planning agencies in their states. The directors' replies, as in the case of areawide metropolitan planning in Table 4, indicated a pronounced

¹Donald W. Lief and Madeline Baker, "Areawide Planning," Nation's Cities (June, 1966), 15-17.

emphasis upon the specialized, problem oriented planning function.

In Table 5 (page 42), the types of planning activities perceived by state officials as being carried out by regional planning agencies seemed, to the author, to fall within four general categories. The largest category, functional planning, covers the many specific planning problems which are undertaken on an individualistic basis. The comprehensive goals and planning-programming category represents efforts to plan for the entire region in all its basic aspects. The technical assistance category represents efforts to assist regional sub-units in their planning and development work. The co-ordination of intergovernmental programs category covers administrative, political and social efforts to rationalize and integrate all planning and development activities going on in a region. These four categories seemed, to the author, to represent logical divisions in the existing regional planning activities. They will be considered the major planning functions of regional planning for the purposes of this study.

If Table 5 represents the current state of affairs in regional planning as perceived by state directors, is that existing situation satisfactory? If we are to delineate our regions based on planning functions, we must consider "ideal" functions as well as "actual" functions if we are to allow for improvements in the regional planning field.

TABLE 5

WHAT STATE PLANNING DIRECTORS SEE AS BEING THE MAJOR FUNCTIONS
CURRENTLY CARRIED OUT BY EXISTING REGIONAL PLANNING AGENCIES

Type of Major Planning Function	Number of times mentioned by directors	
	Sub-Totals	Total
A. Functional Planning		16
1. Economic and industrial development	5	
2. Transportation; Education; Health and Welfare; Recreation	2 each	
3. Land use; Fire and Police; Human resources	1 each	
B. Comprehensive Goals and Planning - Programming		8
C. Technical Assistance to Local Governments and Groups		7
1. Local planning assistance and expertise for local governments	4	
2. Data gathering and information center	2	
3. Zoning assistance	1	
D. Co-ordination of Intergovernmental Programs and Activities		6
1. Agency to handle and co-ordinate federal aids	2	
2. Agency to review local plans and to co-ordinate local governments	2	
3. Agency to co-ordinate regional plans with state programs	2	
E. Agencies Are in the Process of Organizing and Staffing up		4

In order to determine the ideal planning functions, the directors in the interview were asked to list those functions they would like to see being carried out by regional planning agencies. In Table 6 (page 44) the four basic categories utilized in Table 5 also seemed to apply. However, and this is a very important point, the preferential order, or the numerical rankings of the categories, has shifted between Table 5 and Table 6.

Assuming the number of times a function is mentioned by state planners in their interviews as being an indication of its importance, co-ordination of intergovernmental programs and activities rises in order of importance from fourth place in Table 5 (actual) to first place in Table 6 (ideal). It was clearly evident from the interviews that the planning directors felt the co-ordination function was being inadequately performed by existing regional planning agencies. In all areas of co-ordination, the co-ordination of local plans, the co-ordination of regional plans with state-programs, and the co-ordination and handling of federal programs, the planning directors would like to see more guidance and control exercised.

Notice in Table 6 the decreased emphasis on specific functional planning. State planners would also like to find more attention being given to comprehensive planning-programming and more technical assistance being offered to

TABLE 6

STATE PLANNING DIRECTORS' VIEWS ON THE MAJOR FUNCTIONS OF
REGIONAL PLANNING AGENCIES: WHAT IS AND WHAT OUGHT TO BE

Type of Major Planning Function	Number of times mentioned by state planning directors			
	What Ought To Be		What Exists TABLE 5	
	Sub-Total	Total	Sub-Total	Total
A. Co-ordination of Inter- governmental Programs and Activities		16		6
1. Co-ordinate region- al plans with state programs	7		2	
2. Review local plans and co-ordinate local govt.	5		2	
3. Handle and co- ordinate federal aids	4		2	
B. Functional Planning		12		16
1. Economic and Industrial	4		5	
2. Transportation; Health and welfare	2 each		2 each	
3. Education; recreation	1 each		2 each	
4. Land Use; Fire and police	1 each		1 each	
5. Human Resources	0		1	
C. Comprehensive Goals and Planning - Programming		11		8
D. Technical Assistance to Local Groups and Governments		11		7
1. Local planning assistance and ex- pertise for locals	6		4	
2. Data gathering and information center	4		2	
3. Zoning assistance	1		1	

local governments, especially in the area of local planning assistance and regional data bank services.

The greatest hinderance to comprehensive regional planning and co-ordination appears to be the decentralized nature of American government; i. e., separate, independent planning activities are found at all levels; local, special district, region, state and federal. Many of the current planning problems concern political, social, economic and geographic interactions which extend far beyond the control of existing planning units.

"Perhaps the most significant observation that can be made about planning by areas is that there is a hierarchy of planning areas defined by the different problems, but not a corresponding hierarchy of governmental units with the fiscal and sovereign powers to carry out the planning process."¹

An inevitable result of decentralized planning in America is the frequent overlapping and duplication of efforts in the planning process itself. Thomas R. Ford, while studying certain development programs underway in the depressed Appalachian areas, noted:

"It is not uncommon to find in a single county representatives of a hundred or more agencies, both governmental and private, each of which is involved in some aspect of area development . . . Most are faced with problems of personnel shortages of varying degrees of severity and many program administrators are ignorant of the objectives and functions of other programs operating in the same area."²

¹Sidney Sonenblum and Louis H. Stern, Plans, Projections and Policies: An Underdeveloped Tool For Regional Development (Wash., D. C.: National Planning Association, May 21, 1965), p. 10.

²Thomas R. Ford, "Adapting Social Institutions: The Appalachian Region," Research and Education for Regional and Area Development, p. 119.

The state planning directors were acutely aware of this problem.

C. The Major Purposes of Regional Planning: Implications for the Regional Structure.

Having operationalized the concept, "major purposes of regional planning", into four broad categories, the state planner now faces an equally difficult question: Do the major purposes of regional planning, as defined, impose or imply a specific type of region upon the state planner-delineator? In an attempt to answer this question, the author will examine each of the major planning purpose categories and search for any overt or covert clues which might point towards a particular region-type. This search for clues will start with the more ambiguous planning categories and will proceed to the more concrete categories.

1. Technical Planning Assistance to Local Governments and Local Groups.

Local governments can expect to derive a number of benefits from the establishment of a regional planning agency. Among others, the agency will serve as a depository of technical information resources concerning the region which can be made available to any interested group which needs data concerning the region such as public agencies, social organizations, business and industrial interests.

A regional planning agency should have a central planning library which contains publications and technical information

needed to assist local planning and zoning commissions in their activities. Hopefully, the availability of this technical assistance will encourage local initiative and participation in the planning process, both at the local and the regional level.

No particular region-type is uniquely qualified to satisfy the requirements of this planning purpose. However, local governments would probably be more inclined to use the technical services offered by the regional planning agency if they felt confident that their individual fates were closely bound up with the fate of the planning region. A sense of common fate and a general feeling of interdependence within the chosen region would make the technical and political activities of a regional planning agency more feasible. Local governments that felt "bound" to areas outside the regional planning agency's jurisdiction might tend to develop separatist feeling and attitudes.

2. Co-ordination of Intergovernmental Programs and Activities.

To become effective, regional planning must become:

". . . less concerned with specific policy recommendations to legislative bodies and executive agencies than with facilitating communications among appropriate decision-making bodies - looking toward the achievement of consensus for concerted action. . . Consensus on regional action and development will have to be created, fostered, and supported before comprehensive regional planning can emerge."¹

¹Lowden Wingo, Jr., "Regional Planning in a Federal System," Journal of the American Institute of Planners, XXX (May, 1964), 154.

The federal structure of our government and the separation of powers philosophy underlying the American political system is such that any systematic, long range co-ordination of policies at the national level is doubtful. Regional development districts are faced with an urgent need to co-ordinate into some sort of rational whole the innumerable state and federal aids offered local governments: programs for recreation, industrial parks, transportation, health, welfare, water and sewers, economic development, etc. Many of these programs are being undertaken concurrently by adjoining, but separate, units of government without each others' awareness. The regional agency needs to tie-in existing local plans and programs to a long range development program for the region itself. Ideally, the regional agency will speak with a collective voice in matters of regional concern and will provide regional leadership in making demands or requests of state and federal agencies.

Co-ordination of intergovernmental activities, as a function, does not point directly at any particular region-type. However, the concept of common fate or its correlative, common problems, is even more significant for the success of this function than it is for the technical assistance function. The region must appear to be reasonable and viable to all three levels of government in our federal system: local, state and federal.

3. Comprehensive Goals and Planning-Programming.

Comprehensive planning is the central theme and principle tool of the planner's stock in trade. "Encompassing" might well be substituted for comprehensive. The comprehensive plan must cover the major land use activities and circulation patterns of the region. This region, in turn, must encompass sufficient geographic area to include common development problems. The area must be large enough to apply effective solutions to obstinate regional problems.

"Comprehensive plans can be made without altering political boundaries. They cannot be comprehensive, however, unless there is sufficient co-operation to make the territorial scope of the plan equal to the scope of the land use problems that are to be solved."¹

Generally, comprehensive regional development programs involve a number of functional problems in which certain adverse relationships have multiplied over an entire area, such as a local labor market area or a retail trade area. The specific economic and social interrelationships implied in these problems must be considered in the context of their impact on the entire market area. For example, an outdoor recreation and park facilities program for one area must consider the larger region in which potential users of the facilities live. River pollution by cities upstream can

¹Daniel R. Mandelker, Managing Our Urban Environment (New York: Bobbs-Merrill Co., Inc., 1963), p. 434.

vitaly affect the water supply of regional cities downstream. Congested transportation links can retard the economic and social functionings of an entire region and affect the economic advantages of that region in national markets.

Fortunately, federal and state governments have begun to see the interrelationships that exist between basic physical, economic, political and social elements in a region and how these interrelationships can be simultaneously affected by private and public investments in any one area of the region. Effective comprehensive regional planning is local recognition of these facts.

4. Functional Planning

The specific types of functional planning which are currently being undertaken by regional planning agencies presents the state planner with the strongest indicators yet of what a planning region should be. Of the major types of functional planning mentioned in Tables 5 and 6, economic development and transportation planning were consistently ranked one and two.

Economists have long recognized that the economic development of a region and improvements in the region's transportation capacity and density were closely interrelated. Alfred Weber's groundbreaking work in this area analyzed the effect of transportation costs on the geographic location of economic activity. Weber's theories stressed three acute determinants of industrial location: (1) relative transport costs, (2) labor

costs, and (3) agglomeration benefits (economies of scale associated with urbanization and the aggregation of population, markets, resources and other industries at one point). A good transportation network has a positive and fundamental impact on all three locational determinants in Weber's theory.¹

Another standard work in the field of economic location and the effects of transportation upon location is Edgar Hoover's The Location of Economic Activity.² Chapters 4 and 8 in his book outline the intimate ways in which the economic structure of a community or a region is tied to the quality and quantity of its linkages to the transportation system.

Studies of economic history have produced evidence that economic development has had a tendency to follow closely on the heels of transportation expansion. Technological breakthroughs in transport capabilities also has tended to increase the capacity and competitiveness of a region's economy. The transportation system serves specific spatial locations and the benefits of transport improvement have tended to accure to geographical points along that transportation network.³

¹Alfred Weber, Reine Theories Des Standorts (1909). Translated by C. J. Friedrich in Alfred Weber's Theory of the Location of Industries (Chicago: University of Chicago Press, 1928).

²Hoover, pp. 47-66, 116-141.

³A short, interesting account of this process is contained in Walter and Caroline Isard, "Economic Implications of Aircraft," Quarterly Journal of Economics, LIX (1945), 145-47.

Assuming that the transportation system serves as the arteries of the economic region, the planner-delineator still has to ask: What constitutes the boundaries of this economic region?

Nowhere is the elusive character of the non-natural region more apparent than in the search by economists and planners to find meaningful economic regions that will correspond to the changes inherent in the regionalization processes. Spatial economic interactions and activities are, in most respects, continuous and unbroken over space. The term region implies flow discontinuities and discrete boundaries. Thus we find economic theoreticians who study economic systems and interregional economic activity flows frequently in disagreement as to the spatial structure and boundaries of these flows. The smaller a defined region, the more extensive will be its economic relationships and exchange flows with other, exogeneous regions or systems.

Economic theories relevant to this question are those which seek to explain spatial differentiation in the location and relationships of productive factors in the economy. Unfortunately, many of these theories are as relevant for an entire national economy as they are for a single economic region. A complete investigation of these theories would extend this paper beyond manageable proportions. Fortunately, much of the work of relating economic theory to regional

delineation problems has been provided in review articles from the literature of regional science.¹

Very briefly, these theoretical contributions can be placed into four categories and generalized.²

1. Agriculture and urban location theories: the most efficient use of a given piece of land is determined by a function of its distance from the nodal economic center.

2. Industrial location theories: industrial location is essentially determined by the distance and transport costs involved in moving men and materials between a number of geographic points: the input origins of production materials and the output destinations of finished goods.

3. Theories of spatial interrelationships: the effects of economies of scale, of urbanization, of agglomerations, of transport costs, of production factor linkages on economic location.

4. Foreign trade theories: trying to determine the optimal specialization of production for a specific geographic area given its resource capabilities.

¹John R. Meyer, "Regional Economics: A Survey," American Economic Review, LIII (March, 1963), 19-54; Brian J. L. Berry and Thomas D. Hankins, A Bibliographic Guide to the Economic Regions of the United States (Chicago: University of Chicago Press, 1963); Lloyd Rodwin, "Choosing Regions for Development," Regional Planning and Development; Edwin von Boventer, "Toward a United Theory of Spatial Economic Structure," Papers and Proceedings of the Regional Science Association, X (1963), 163-188; and Gunnar Olsson, Distance and Human Interaction (Philadelphia: Regional Science Institute, 1965).

²Boventer, Papers and Proceedings of the Regional Science Association, X, 173-4.

These regional economic theories, from the viewpoint of the planner-delineator seeking to define concrete boundaries for proposed planning regions, leave much to be desired. Land economist Lloyd Rodwin, after struggling through the four categories of economic theory above in a vain effort to extract substantive delineation criteria, finally concluded:

"My guess is that some rough ad hoc internal demarcations of the leading development regions will have to suffice for the decision-maker's purposes. The nucleus would be some existing or potentially important urban complex. The outer limits of its boundaries might be roughly mapped on the basis of the hinterland which appears likely now or in the future to come within the market and influence zone of this complex: and the actual boundaries should conform as closely to these limits as data gathering opportunities permit."¹

¹Rodwin, p. 55.

CHAPTER IV

SELECTION OF A REGION-TYPE SUITABLE FOR THE MAJOR PURPOSES OF
REGIONAL PLANNINGA. Statement of the Problem.

Chapter III attempted to operationalize the term, "major functions of regional planning", and to explore the implications of these functions for regional delineation. In brief, the four major functions, derived by the author from the statements of state planning directors, were comprehensive planning-programming, a wide range of functional planning activities, intergovernmental co-ordination, and technical assistance to local governments and groups. Earlier in Chapter II, three basic types of theoretical regions were discussed. These were the administrative or minimum standard region, the uniform or homogeneous region, and the nodal region. Chapter IV represents the third step in the delineation process. Here the planner-delineator must match the functions of regional planning to the characteristics and structure of the three region-types and select the most suitable one in his opinion.

This question, in turn, raises a semantic problem regarding the "ideal" region as opposed to an "effective" or "suitable" region. No one region can suffice for all possible planning purposes or problems. Certain special regions must be used for some special problems. Water resource and river

basin planning, or airshed and air pollution planning, raise geographic and methodological barriers to a uniform, multi-purpose set of planning regions.

While no single set of regions could serve as appropriate districts to serve all conceivable planning purposes, it seems equally clear that a common, multi-purpose regional unit for study and action represents a vital and necessary step in solving and co-ordinating the many interrelated planning problems. This regional unit could be made open-ended; i. e., additional areas could be incorporated into the regional framework as conditions warranted it.

Various planning functions need to be differentiated into hierarchical planning levels. As a case in point, garbage collection might well be a function of local governments. However, finding adequate space and locations for sanitary landfills within the region might better be co-ordinated through an areawide planning agency which represents the interests of all nearby political jurisdictions having garbage disposal problems. Problems covering extensive areas, such as water supply and water pollution along a major watershed, might well require a series of interregional co-operation compacts supervised by state or federal agencies.

The region we seek is the one which encompasses a majority of the common, interrelated problems hindering or affecting an area's development.

B. Evaluation of the Theoretical Region-Types.

Several clues as to the characteristics of a suitable

region-type were deduced by the author from the analysis of major regional planning purposes in Chapter III. First and foremost, the suitable planning region should exhibit an internal cohesiveness which marks it off from "outside" areas. This cohesion is created and abetted by a population that shares certain basic attitudes, values and outlooks produced by similar adjustments to similar environments; and by a common economic base which operates, to a large extent, within that region. This economic base provides employment, goods and services to the entire region. The region must be large enough to encompass the major problems of the area in order that proposed solutions to critical problem-needs can be carried out effectively within the region itself. The planner-delineator must decide which of the theoretical region-types best meet these requirements.

1. The Administrative or Minimum Standard Region.

The administrative region will probably not coincide with either economic or social "regions" but its structuring, usually of aggregated political units, helps to insure that the data necessary for analysis and administrative decision-making will be available from existing sources. The county is the common building block for administrative regions. There are excellent political reasons for retaining county political units. Economies of scale and region-wide policy making could be accomplished via functional consolidation within

the administrative region without destroying old, partisan county loyalties.¹

The county as a building block has many political advantages: public agencies are already structured on county lines; most congressional district lines and most legislative district boundaries follow county lines; and, numerous socio-political activities have been historically organized along county lines. Planners who build new regions by ignoring existing political boundaries only create additional, and all too often, insurmountable obstacles.

Unfortunately, administrative considerations alone, like "span of control", aggregation of existing political units, and minimum population requirements, do not insure the creation of regions possessing internal cohesion and an interdependence of local economic and social factors. The administrative region generally creates a convenient geographic unit for paternalistic, federal or state policy purposes. A new political-administrative structure needs to be built over existing, regional socio-economic relationships.

2. The Uniform or Homogeneous Region.

The homogeneous region is generally composed of an area within which a common characteristic or a set of common characteristics falls into a predetermined range about some pre-

¹This approach is advocated most forcefully by Donald E. Boles, "Process and Reality in Implementing Planning Goals," in Research and Education For Regional and Area Development, pp. 128-29.

determined standard. In many cases, this homogeneity is expressed as a statistical index which measures the degree of this uniformity over a wide range of characteristics. The variation of these characteristics should be smaller within the region than they are outside the region. On its face, the homogeneous region appears to meet the criteria of internal commonness which characterizes the "ideal" planning region. However, some scholars have been very critical of the statistically homogeneous regions utilized in studies by statisticians and econometricians. These scholars have asked: Can homogeneous regions ultimately be used for pragmatic, problem-solving purposes in regional science and planning?¹

Statistical techniques, to a large extent, measure the level and type of economic interaction, not the direction and control of this economic activity. Thomas Ford, in analyzing various development programs currently underway in the depressed Appalachian areas, noted, with dismay, that most Appalachian development regions were delineated as:

". . . multiple-feature, uniform regions defined on the basis of common characteristics rather than functional regions whose component parts are related by ties of functional interdependence."²

¹J. L. Fisher feels the statistically homogeneous region is quite inadequate for regional policy making. See "Concepts in Regional Economic Development Programs," Papers and Proceedings The Regional Science Association, I (1955), W1-W2.

²Ford, p. 111.

Thus common economic or demographic characteristics may not indicate an internal cohesion; especially in regards to functional economic interdependence. Common demographic data or common unemployment statistics do not insure a common socio-political outlook.

3. The Nodal Region.

The nodal region, with its central, urban locus and its density of socio-economic interactions decreasing with distance from the locus, has had a strong appeal to a number of theorists: planners, economists and geographers. Under the nodal concept, the urban center is seen as a node related by functional economic linkages and a transportation system to its surrounding hinterland areas. These hinterlands are created by a wide range of functional economic interactions which decrease in intensity and density with increasing distance from the urban center. The cost of overcoming this distance acts to aggregate economic activity around the center. John Friedmann states the case for the city region distinctly:

". . . the United States economy maintains a definite spatial structure expressed in the patterns formed by city regions and functional planning will usually be carried out successfully where it is closely related to this pattern, point for point. City regions are the nerve centers of economic life in an area. They are the seats of economic power where most of the population is concentrated, where most of the vital decisions affecting large areas are made . . . any planning which ignores this primary fact about the spatial structure of an economy must be judged unrealistic."¹

¹Friedmann, "The Concept of a Planning Region," p. 515.

Historically, American economists have centered their attentions upon the production and distributing functions of our economy. The main interests in American economics were in the primary and secondary sectors of the economy. Emphasis has been shifting recently to the rapidly expanding service sectors of the economy and consumption patterns associated with higher average per capita income levels. Economic geographer Brian J. L. Berry presents the thesis in his recent work that:

". . . the geography of retail and service business displays regularities over space and through time, that central place theory constitutes a deductive base from which to understand these regularities, and that the convergence of theoretical postulates and empirical regularities provide substance to marketing geography and to certain aspects of city and regional planning."¹

In Berry's view, the American system of exchange takes place through a process of distributing goods and services to the consumer from the producers. This exchange takes place in markets where the buyers and sellers communicate. It is in hundreds of thousands of small market centers where the daily person-to-person process of exchange takes place. Producers send goods to, and consumers travel to, the retail stores. Retail and service businesses end the chain of production and distribution and begin the process of consumption. While the economic geography of production emphasizes the regional

¹Brian J. L. Berry, Geography of Market Centers and Retail Distribution, p. vii.

differentiation of production activity, the economic geography of consumption studies demands for similar baskets of market goods by consumers in most regions. Regional production specialties and services are exported to major distribution points in other regions. These distribution points, usually metropolitan centers, distribute the products out to the retail centers in their wholesale hinterlands.

"The essence of the geography of retail and service business is the clustering of establishments in market centers visited by surrounding consumers. Retail and service business geography is thus inseparable from urban and transportation geography because the commodity flows in a modern economy studied by the transportation geographer ultimately links producer and consumer, and are articulated by the network of cities and towns studied by the urban geographer.¹

Berry's concept of the urban market center serving its consumer region has been discovered and reaffirmed in one form or another by scholars and planners in all parts of the United States. In heavily urbanized Connecticut:

"People no longer live their lives in a single municipality. The demands that could once be met by the 'home town' can now only be met by a combination of towns and cities; the region itself, has become the 'home town'."²

¹Ibid., pp. 2-3.

²State of Connecticut, Development Commission, Planning Connecticut's Regional Communities (Hartford, 1963), p. 3.

In sparsely populated South Dakota:

"Each of us is, in fact, a member of several communities . . . The people who shop or sell in a town or city have a common interest. Therefore, the people in the trade area represent a community . . . We may live in several trade areas, but we are most concerned with the area in which we live, work, play and can buy most of the goods and services we want today. This is an area large enough to supply us with all of our normal requirements and is thus an economically viable unit. This trade area has a center which has been defined as a complete shopping center."¹

The growing interdependence between the retail center and its nearby hinterland has created what some planners call the "functional city"², a clustering of urban, suburban and rural elements that act as a complex, urbanized entity. Many of the towns in the complex are rural but the road network, the social and economic activities, and the communications flows are all directed toward, and centered on, the central city which serves as a governmental, wholesale, retail, and employment center for the entire region.

"For several decades, the people who live in the open spaces and the small towns and villages of rural America have been establishing new community definition. The boundaries are not marked by political lines. Rather, they are established by the reach of modern communications and by the automobile and all-weather roads. Commuting time by car sets the feasible limits on the choice of

¹Robert J. Antonides, Some Guidelines for Organizing Economic Development Efforts in South Dakota Along Trade Area Lines, Extension Circular 651 (Brookings: South Dakota State College, undated), p. 4.

²Robert C. Young, Director, Regional Planning Section, Connecticut Development Commission, "Regional Planning in Connecticut - Challenge and Response," (1962), p. 2 (Mimeographed).

job opportunities, on access to health care and to education, on participation in cultural events, and on the dimensions of the marketplace both for the buyer and seller and of consumer goods and services. Thus, a functional community has evolved by a process of voluntary choice of both city and rural people."¹

Brian Berry asserts further that central place ideas provide a strong theoretical base upon which a system of regions can be created and efficiently administrated. Considering governmental functions in terms of consumer services, the wholesaling centers serving smaller retail centers in the hinterlands could easily be designated as state regional administrative centers with an occasional branch office being located in the larger retail market centers. This would insure that the administrative system, like the market place, was set up to distribute goods and services to the points of greatest demand.²

The nodal region seems to contain the internal cohesion and the functional socio-economic interaction that we seek in a suitable region-type. Common interests and values are engendered by the regional "viewpoint" created when the central node has intimate and frequent contacts with its surrounding hinterlands. The nodal region appears to have administrative

¹Robert C. Lewis, Rural Community Development Service, USDA, "Community Development District Planning," State Development Strategies, Office of Regional Development Planning, U. S. Department of Commerce (January, 1967), p. 19.

²Berry, Geography of Market Centers and Retail Distribution, pp. 132-33.

value as well; i. e., people are oriented toward the central node for goods and services, both retail and governmental.

C. Testing the Popularity of the Nodal Region Among State Planners.

If the author's assumptions are valid and the nodal region is best suited to the major purposes of regional planning, as defined, then it should be clearly favored in the delineation documents obtained from state planning agencies. To test this hypothesis, the author undertook a content analysis of twenty five state planning offices' delineation documents.¹

Table 7 (page 66) presents the results of the content analysis in tabular form. Pure nodal regions head the listings. The numerical superiority of nodal regions becomes more apparent if we total the number of delineation documents that utilized the nodal region-type, either alone or in some combination with other region-types. Seventy six percent of the state documents used nodal regions alone or in combination. Forty eight percent of the documents used uniform regions alone or in combination. Only twenty eight percent of the documents used administrative regions alone or in combination.

¹All fifty states were asked for delineation documents by mail. Twenty five states sent delineation documents with the criteria and methodology used. Nineteen states had not delineated regions. Two states sent regions but no delineation criteria. Four states did not reply (See Appendix II). The twenty five states analyzed in Table 7 are: Arkansas, Connecticut, Delaware, Georgia, Hawaii, Kansas, Illinois, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, Utah, Washington and West Virginia.

TABLE 7

REGION-TYPES UTILIZED BY STATE PLANNING OFFICES IN THEIR
DELINEATION DOCUMENTS

Region-Type Utilized	Percentage of documents having this
1. Nodal Region only	36
2. Nodal and Uniform Regions combined	28
3. Administrative Regions alone	12
4. Uniform Regions alone	8
5. Nodal, Uniform and Administrative Regions combined	8
6. Nodal and Administrative Regions combined	4
7. Uniform and Administrative Regions combined	4
Total	<u>100%</u>

Assuming that the state planner accepts the nodal region as being a suitable planning unit, and assuming he has delineated comprehensive nodal regions for his entire state¹, he still faces a monumental task: getting local, state and federal units of government to accept his regions. Chapter V will discuss in detail some of the problems encountered by state planners in implementing their regional delineation program and will offer some suggestions for overcoming these problems.

¹Step four in the delineation process, the technical aspects of dividing the state into regions, is discussed in Appendix III. The author presents a suggested delineation methodology utilizing the nodal concept which he feels will speed up and simplify the task for state planners.

CHAPTER V

IMPLEMENTING THE REGIONAL DELINEATIONS: PROBLEMS ENCOUNTERED
AND STRATEGIES USED BY STATE PLANNERSA. Problems Internal to the State Planning Agency Itself.

Step five in the delineation process is the implementation of the regional delineation program: getting the state delineated regions accepted, organized and staffed. If the state planner fails to carry out a forceful implementation policy, the other four steps of the delineation process are likely to become academic exercises in futility. Unfortunately, most state planning agencies must begin their implementation programs with certain inherent handicaps.

A state planning agency has access to an impressive array of potential tools it might use to implement delineation policies and regional plans. However, the state government must be committed to a comprehensive approach for statewide development. Among the state's arsenal of planning-programming tools are: an intermediary position in the federal grant-in-aid programs, incorporation and annexation controls, capital budgeting and public works programming, fiscal taxing policies, technical expertise, etc. Full use of these potential tools is denied the state planner because of three major internal handicaps.

First, effective state planning has been crucially hamstrung by a lack of co-operation between state line agencies

and the state planning offices. State planning offices seldom have had effective channels of communication open to other state agencies and the other state agencies have tended to plan their yearly programs independently of each other and the state planning office. Most state agencies have independent, and often conflicting, sub-state regions which they use for single-purpose, functional programming and budgeting.

Secondly, the state planning offices have seldom been strong agencies: administratively, politically, or in depth of personnel. In general, state planning offices have limited statutory authority, their staffs usually lack either the experience or the willingness to get actively involved in the political decision-making process, they have often been separated from budget and fiscal affairs, they have tended to get preoccupied in long range, comprehensive planning without adequate consideration being given to the plan's eventual implementation, they have been unable to define their own roles in the state's administration much less their own agency's goals, and they have generally failed to provide state government with useful policy information, such as cost-benefit accounting, suggested program prioritizing systems, and effective program feedback analyses.

State planning, as a field and as an occupation, has all the earmarks of a new profession. A clear absence of definition exists, both as to the role of state planning, and as to the parameters and subject matter of state planning.

". . . planning is not a profession, but a mixture of professions, and the failure to develop professional esprit and a common outlook has had its effects on the planning process."¹

By and large, state planning agencies are directed by people who were not academically prepared as regional planners. The directors are generally younger men who entered into the state planning field from a variety of positions and occupations. The ages of the state planning directors in the interview ranged from 53 to 28. The average age was 38, the modal age, 37, and the median age, 37.

A third handicap hindering the state planning offices, now slowly being overcome, is the lack of effective executive interest and support. The state planning office has generally failed to demonstrate to the governor its value in policy-making. The governor needs information and advice on policies which concern both immediate and long range considerations. Hesitancy on the part of planning offices to get involved in "brush fire" problems lessens their chances of being called upon to suggest solutions for long range problems.

The subordinate position of state planning in the structure of state government can be assessed from Table 9 (page 71). Only three of the twelve directors interviewed were directly in the governor's executive staff. However, three other directors, who did not have a direct organizational

¹Mandelker, p. 426.

TABLE 8

THE STATE PLANNING DIRECTORS' ACADEMIC AND OCCUPATIONAL HISTORIES

Question: What is your highest academic degree?	Total
1. Bachelor of Science or Arts	4
2. Masters of Science or Arts	7
3. Doctorate	1
Question: What was your major field of study?	Total
1. City Planning	4
2. Landscape Architecture	2
3. Regional Planning	2
4. Geography	2
5. Economics	1
6. Political Science	1
Question: A short job history giving major positions.	Total
1. Various subordinate positions in state planning	10
2. City planning	4
3. County and Regional Planning	4
4. Private Planning Consultant	3
5. City manager	2
6. State highway planner, city engineer, elected city official, college teacher, urban renewal planner, and private development agency planner	1 each

linkage to the governor, implied that they had ad hoc, informal relationships with the governor which allowed them to consult him without going through administrative channels. Few of the directors considered themselves to be among the inner circle of gubernatorial advisors.

TABLE 9

STATE PLANNING DIRECTORS' ORGANIZATIONAL LINKAGES TO THE GOVERNOR

Question: How many positions is the director of state planning down on the organizational chart from the governor?	Total
1. Direct link	3
2. One position	5
3. Two positions	1
4. Three positions	3

The preceding, rather pessimistic cataloging of state planning handicaps may seem overly sharp and critical. The author did not intend a blanket condemnation of all state planning operations. The criticisms were intended as general statements about the common problems of the average state planning office. In this, the author was summarizing critiques from recent studies.¹

B. Implementation of Regional Delineations: Support, Opposition and Strategies.

Despite the major handicaps experienced by many state planning offices, several state planners have undertaken active programs to get their state delineated regions accepted

¹The most significant study is the recent comprehensive, in-depth interviewing of all state planning offices as to their roles and functions by the Institute on State Programming For the 70s, at the University of North Carolina. Research assistants who had been interviewing state planning officials gave a preliminary report on their findings at the meeting of the Council of State Planning Agencies, Lexington, Kentucky, August 7, 1967. Additional analyses are found in Alan W. Steiss, "State Planning: A Framework for Policy Decisions," State Government, XXIX (Autumn, 1966), 252-259, and John W. Dyckman, "State Developmental Planning: The California Case," Journal of the American Institute of Planners, XXX (May, 1964), 145.

and organized. This section of the chapter will follow the state planner through the organizational process. The first problem is getting the regions recognized by pertinent interest groups.

The mutual acceptance of a common set of regions for intergovernmental policy uses will affect a number of interest groups. Some of these groups will tend to agitate against the proposed regions while others will coalesce around them in supportive movements. In order to gain some insight as to the sources of resistance to, or support for, state initiated regions, the state planning directors in our survey were asked to envisage the following situation:

"Your agency has prepared a suggested regional delineation for your state. You are, I am sure, quite aware of the fact that attempts by the state to establish multi-county, regional planning agencies, if based on these regional delineations, would produce both support and resistance in a number of places. To help you to more easily visualize this problem and to give us some 'insight' as to the 'climate' for regional planning in your state, please consider, if you will, the following, imaginary situation:

Your state legislature passes a statute authorizing your agency to set up multi-county, regional planning agencies based on your agency's previously delineated regions. The statute authorizes voluntary regional planning councils composed of local governmental representatives and a planning staff financed by local government assessments matched by a 50% state grant. The functions of the regional planning agency are to be determined by the local government council. As your agency went about the process of organizing local governmental support for regional planning and setting up the new agencies, proponents and opponents of regional planning, based on your regions, would likely appear.

Based on your own knowledge and experience in this state, where, and from what groups, would you expect to find support for, or resistance to, your setting up of regional planning agencies in the state delineated regions?"

Table 10 (page 74) lists the various interests and factions which state planning directors felt would be aligned, either for or against, state efforts to set up the regional planning agencies. The general impression one gains from Table 10 is one of overall acceptance of the regional planning concept at the local levels, especially among local political, public and community leaders. However, a small number of the directors expected resistances from these same groups. The strategies used in organizing support for regional planning seem to have a bearing on how many of these important community leaders are swayed to the side of regional planning.

Local resistance from people who fear governmental control from state and federal agencies, or urban domination over surrounding rural areas is understandable, but it comes as a surprise to discover that many state planners see local planning bodies as sources of resistance. One would hope the planning "ethic" could overcome provincial attitudes about separatist, "home rule" planning. Apparently, the state planner must stress to local planning bodies, early in the organizational process, the supplemental and technical assistance aspects of the regional planning agency thereby placating jurisdictional jealousies.

TABLE 10

EXPECTED RESISTANCES TO, AND SUPPORT FOR, REGIONAL PLANNING AGENCIES
AT THE LOCAL LEVEL OF GOVERNMENT AS SEEN BY STATE PLANNING DIRECTORS

Question: What resistance or support would you find in local areas to your regional delineations and regional planning organizations?	Directors who saw these as	
	Pro	Con
A. Local elected public officials and state legislators	9	2
B. Local political and community leaders	8	2
C. Little organized resistance	8	-
D. Chambers of Commerce	5	0
E. There will be a general public demand for better public services	2	0
F. Local planning bodies	2	4
G. Multi-county private organizations, local federal officials, private power companies, labor unions, league of women voters	1 each	0
H. People who fear state and federal controls	-	4
I. Small cities which fear central city control and rural people who fear urban control	-	2
(Highest score possible = 12)		

Some of the comments by state planning directors:

"One finds very little resistance to regional planning at the local level. Basically, resistance comes from those afraid of super-government or the loss of local rights. Many are quite ignorant about planning. Resistance is highly individualistic and unorganized."

"General support for regional planning comes from people who are unhappy about the poor quality of governmental services. These people tend to be more educated, politically active, articulate and more likely to take an active role in organizing planning efforts."

TABLE 11

EXPECTED RESISTANCES TO, OR SUPPORT FOR, REGIONAL PLANNING UNITS
AS UNIFORM SERVICE AREAS FOR ALL STATE GOVERNMENT PROGRAMS.

Question: What support and what resistance would you expect to find at the state level to your regional delineations and regional planning agencies if you tried to designate them as uniform service areas for all state government programs?	Directors who saw these as	
	Pro	Con
A. The governor	4	1
B. Most state agencies without large capital investments in regional plants	4	-
C. Health department	3	0
D. Natural resource department	2	0
E. Little resistance from state agencies	2	-
F. Highway department	2	5
G. Mental health and welfare	2	2
H. Agriculture, Education	1 each	1 each
I. Conservation	1	2
J. Finance & administration, Federal programs co-ordinator	1 each	0
K. Agencies with large capital investments in regional plants	-	3
L. Extension services at state universities	0	2
M. Water resources board, Associations of city and county officials, Impossible to achieve	0	1 each
(Highest score possible = 12)		

Resistance to the use of the regions as uniform administrative areas for state governmental programs is most pronounced among those state agencies which have invested large amounts of capital in existing buildings and facilities throughout the state, especially the highway departments. Departments which have administrative regions already set up on natural geographic criteria, such as the conservation and water resources

boards, would be less willing to accept regions based on socio-economic criteria. Agencies with institutions and large staffs located throughout the state (like mental health and welfare) have more rigid administrative regions and are less prone to unification.

Some of the state planning directors' comments:

"Getting uniform service areas would require much persuasion. I know that several state agencies would like to see it happen and it will occur over the next 20 years. Many agencies see the value of uniform regions; the others have to be forced."

"The highway department would be against uniform regions but it will be amenable to planning per se. The Governor's Office is becoming concerned about future political pressures which will be generated from these districts."

TABLE 12

EXPECTED RESISTANCES TO, OR SUPPORT FOR, REGIONAL PLANNING AGENCIES AT THE FEDERAL LEVEL OF GOVERNMENT AS SEEN BY STATE PLANNING DIRECTORS

Question: What support for, and what resistance to, would you expect to find at the federal level to your regional delineations and regional planning agencies?	Directors who saw these as	
	Pro	Con
A. The Appalachian Regional Commission	4	0
B. Department of Housing and Urban Development	4	1
C. Economic Development Administration	4	6
D. A general federal acceptance of the regions	3	-
E. No active resistance to the regions	3	-
F. Presidential directives support our state regions	2	0
G. Department of Agriculture	2	2
H. Office of Economic Opportunity	2	2
I. Department of Mental Health, Bureau of the Budget	1 each	0
J. A confused federal approach complicates approval, Census Bureau, The Tennessee Valley Authority (Highest possible score = 12)	0	1 each

At the federal level, the Appalachian Regional Commission seems most attuned to state delineations. However, the Appalachian Commission is unique in that it has joint federal-state authority and control. The Economic Development Administration, which has some rigidities in its delineation criteria created by federal statutes, had apparently alienated at least half of the directors in the survey. The overall impression is one of permissive acceptance of state regions by the federal agencies but in an unco-ordinated, confused, and lengthy acceptance process.

Some of the state planning directors' comments:

"The President's directive provided strong support to state efforts. USDA and HUD seem able to get together on local planning but not EDA."

"We generally get acceptance of our regions from federal agencies after a short period of haggling."

"Federal field people will work closely with you but the trouble comes at the upper administrative levels. OEO and HUD have been especially helpful in technical matters."

"OEO and EDA seem to want to restructure our administrative organization and our existing regions."

"EDA has multi-state districts which conflict with our state regions. They are trying to impose these regions over the state regions."

Tables 10 through 12 seem to indicate that a dynamic state planning operation can get support for its regions at all levels of government. Open, organized resistance to state delineated regions is apparently not prevalent at any level of government. However, the strategies used by

the state planners to set up regions and to organize regional agencies has a direct bearing on how quickly and how successfully the regional program can be carried out. The survey explored this problem of implementation strategies (see Table 13, page 79).

An ability to use effective public relations techniques, both personal, face-to-face, social techniques and the more general ability to present or disseminate information to the public through the mass media or formal speeches is a key weapon which state planners feel a man must possess if he seeks to effectuate the state's regional delineation program. The basic task is getting the local power structure, and through them the local public, to realize that they carry out their social and economic lives within an interrelated region. Once this idea of "regionalism" has begun to penetrate local thinking, it can be reinforced by repeated listings and optimistic forecastings of the many potential benefits which their region might expect from an active planning operation. Emphasis should be given by the state planner to the "rich" federal programs that require regional planning. If the Governor will refer to the regions in his speeches and utilize the regions for future state programming, a powerful impetus can be given to this regional "image".

Of special interest for this thesis was the director in Table 13 whose optimum strategy included a rational, well-

TABLE 13

STATE PLANNING DIRECTORS' OPTIMUM STRATEGIES USED TO DEVELOP
SUPPORT FOR REGIONAL PLANNING AGENCIES

Question: In your opinion, what would be the optimum strategy to use in gaining support for active regional planning in your state?	Directors who recommend this	
	Sub-Total	Total
A. Develop intensive personal contacts		11
1. with political leaders	4	
2. with mayors and county judges	3	
3. with local civic groups	2	
4. with state legislators; chambers of commerce	1 each	
B. Disseminate information about the benefits of regional planning		10
C. Emphasize the federal money available for regional planning		4
D. Have the Governor use regions in his programs and policies		3
E. Encourage educational research programs centered on regions; form an alliance with private power companies		2 each
F. Work for one successful region and use it as an example to encourage others; have rational, well-designed regionalizations with easily understood criteria		1 each
(Highest possible score = 12)		

designed, regionalization document formed around criteria that made sense to the local people.

Some of the state planning directors' comments on an optimum strategy:

"The first move is to contact the political power structure - mayors, chairmen of county commissioners, chairmen of city councils, etc. Then you involve the major contributors to the general economy - businessmen, industrialists. Private power companies are always interested in regional development, also chambers of commerce."

"Personally contact every mayor and county judge in the region and spread regional planning information around in public meetings. Contact the local leaders at least once a week during the initial stages. Some state legislators will work for you if you contact them prior to the organizational stage."

"Tell the local people that this is an opportunity for growth and if they fail to take this opportunity - they will lose out on all the available federal aid monies."

Once the local political powers and the local communities begin to think about specific regional problems and once they get experience in successfully working together on one problem, a chain reaction is likely to follow:

"Legislative [state] dependence on territorial constituencies makes regionally based programs politically attractive to some. Thus, even limited territorially defined problems can secure powerful representation. Survival of legislators is linked to the continuance of the population in their districts."¹

C. Technical Aspects of the Implementation Program:

Organizing and Staffing the Regional Planning Agency.

The exact structure of the sub-state regional planning agency is, itself, a point of contention among state planning officials. The state planning directors in the interview were far from unanimous regarding the type of regional planning agency they would like to see organized within their delineated regions (See Table 14 page 81). Suggestions about the appropriate governmental structure for a regional planning agency ran all the way from a purely advisory group of technicians offering assistance to local governments up to a

¹Long, p. 126.

TABLE 14

STATE PLANNING DIRECTORS' VIEWS ON THE STRUCTURE AND FINANCING
OF REGIONAL PLANNING AGENCIES

Question: In your opinion, how should
a regional planning agency be structured
and financed? Number

A. Structure	
1. as a planning advisory staff to local govt.	4
2. as a planning committee under COG	4
3. as an integrated part of the state planning operation	2
4. as a unit of regional government	2
Total	12
B. Finance	
1. state and local funds	6
2. federal, state, and local funds	3
3. federal and state funds	1
4. state funds alone	1
5. local funds alone	1
Total	12

planning unit of regional government. State planning directors, generally would like to maintain some control or maneuverability over the activities of these new regional agencies. State planners would like to mesh regional programs with state development programs and policies. Significantly, two of the directors interviewed wanted to keep regional agencies as an integral part of the state planning office. As one of the directors stated:

"I see the regional planning agency as part of state government. The regional plan is used as an input to the state planning program. The regional agency, in turn, will carry out the programs of the state government. Therefore it should be totally financed by state government."

A majority of the directors would prefer to use a more indirect approach in influencing regional agency activities; i. e., state financial assistance programs. Eleven of the twelve directors wanted the state to provide some portion of the administrative funds required to staff the agencies. Ten directors would like to see significant local contributions to the funding of regional planning. Note that only four directors called for federal fiscal support despite the fact that most of the monies currently available for regional planning have been derived from federal sources. An attempt at downgrading federal financing and emphasizing local funding was evident in the following remarks made by two directors:

"I feel the agency should be actively supported by local governments and assisted by the state. We don't encourage federal aid, especially if it negates local funding. Federal money stands third in the line of authority."

"The agency should be largely financed locally. The more money contributed locally, the more interest that will be generated. The state should help finance the poorer regions on some type of per capita income basis."

Personnel requirements for staffing the new regional planning agencies were derived from another item in the interview questionnaire. The interviewees were presented with a comprehensive listing of occupations that might be considered useful in the regional planning process. The interviewees were asked to imagine themselves as the directors of a brand new multi-county, multi-purpose, regional planning agency.

Under the condition of a limited budget (the definition of a limited budget was left up to the individual planning director's own experiences), the interviewees were asked to check which of the occupations they would consider as primary regional planning staff members for the initial setting up of their agencies.

As expected, every planning director chose a regional planner for his primary staff. The regional planner should be capable of supervising all the major planning functions outlined in Chapter III, especially comprehensive regional planning-programming. Note the relationship between the other highly regarded occupations and the remaining major planning functions. Economic and industrial development planning was a main segment of the functional planning category and the economist ranks second only to the regional planner in Table 15. Public administrators, ranked third, with their organizational expertise and administrative skills, would be most useful in the co-ordination of inter-governmental programs. The city planner, ranked fourth, would fit an appropriate role as a dispenser of technical assistance to local governments.

We might conclude from Table 15 that the basic "core" staff of a multi-purpose, regional planning agency could be assembled around four professions: a regional planner, an economist, a public administrator and a city planner.

TABLE 15

STATE PLANNING DIRECTORS' CHOICES OF PRIMARY STAFF OCCUPATIONS FOR
NEW REGIONAL PLANNING AGENCIES

Occupation	Percent of the 12 respondents designating this occupation as primary
Top Group	
1. Regional Planner	100
2. Economist	92
3. Public Administrator	62
4. City Planner	58
Middle Group	
1. Statistician, Civil Engineer, Public Relations Specialist, Natural Resource Analyst	42 each
2. Geographer, Lawyer	33 each
Lower Group	
1. Sociologist	25
2. Public Finance Analyst	16
3. Social Worker D. S. W., Industrial Development Specialist, Urban Designer, Political Scientist, Hydrologist	8 each
Occupations Receiving No Primary Votes Architect, Agronomist, Anthropologist, Geologist	

D. Addendum on the Nodal Region.

The nodal region concept, so useful in the delineation program, has certain limitations in the organizational process.

In the interview, state planners were asked:

"Based on your own knowledge and experience in the field of regional planning, which of the types of planning regions given below do you feel would be

most easily organized for regional planning purposes in your state? (Which region-type has the best chance of being accepted by local governments and local interests?)

The replies to the question are contained in Table 16 (page 86). At first glance, Table 16 appears to be a refutation of the nodal regions' superiority so evident in the twenty five state delineation documents analyzed in Table 7 (page 66). However, the directors, in explaining their choice of region-type, indicated that the nodal region had potential political liabilities despite its theoretical and empirical validity. Any parasitic implications in the central city-hinterland idea can be ruinous for the purposes of gaining support for regional planning at the local level.

Some of the directors' comments:

"The nodal region concept creates great arguments from the suburbs who will fight the central city at the drop of a hat. It's easier to sell common interests and common problems in a common region."

"We use the nodal region in our delineation process but in the organizational process we introduce the region to the local people as a uniform region which has common problems and mutual interests. Talk about dependent-independent relationships between the central city and the small towns is political dynamite in the rural areas."

Obviously, the use of the nodal region will require a certain amount of diplomacy on the part of the state planner.

TABLE 16

THE REGION-TYPE FAVORED BY STATE PLANNING DIRECTORS FOR THE
PURPOSES OF ORGANIZING REGIONAL PLANNING LOCALLY

Region - type	Number of directors favoring this type
A. A uniform region containing several counties which have common or homogeneous socio-economic or natural characteristics	7
B. A nodal region consisting of a major central city and its surrounding hinterland areas	5
C. Regions based on some administrative criteria such as a minimum population size, a minimum number of counties, a maximum geographical size, a convenient size for administrative control, etc.	0
D. Other - please explain	<u>0</u>
	Total 12

CHAPTER VI

A SUMMARY

A. Findings and Conclusions from the Study.

The multiplication of regional planning agencies in the United States is intimately related to the regionalization process. This regionalization process is a socio-economic phenomenon created basically by improved mechanization and transportation technologies which have contributed to increased population mobility and its concentration in and around major urban centers.

Political adjustments to this regionalization process have lagged considerably. The problems of metropolitan areas and of depressed agricultural or mining areas require political and economic solutions beyond the present capacities of local governmental units. Federal legislation to help alleviate the problems created by the regionalization process has produced a confusing array of regional planning units. State governments have been under increasing pressures to step in and bring some rational unity to the proliferation of regional planning units. The state governments have the statutory authority to undertake this role. If they do not act, they may soon be inundated by a number of overlapping regional units competing within their state boundaries for scarce resources.

Assuming the state government decides to take an active role in meeting the challenges of the regionalization process, certain basic steps must be followed in arriving at a rational system of regions for intergovernmental policy purposes. The first step a state planner must take, in the sub-state, regional delineation process, is a search of the literature to find available region-types. Three basic region-types were found in the literature: the uniform or homogeneous region, the nodal region, and the administrative or minimum standard region.

Before the state planner can select a suitable region-type, he must know the major purposes for which the regions are being created. Survey data from interviews with state planning directors indicated that four major purposes were associated with regional planning: comprehensive goals and planning-programming, co-ordination of intergovernmental programs and activities, technical assistance to local governments and groups, and various specific types of functional planning.

Each of the four categories of major regional planning purposes had implications for the selection of a suitable region-type. Generally, the region needed to possess: internal cohesion, a population having common attitudes produced by similar environmental conditions, a common economic and social base serving the entire region, and sufficient geographic area and resources to effectively meet and solve areawide problems.

After matching the major purposes of regional planning to the theoretical region-types, both the administrative and

homogeneous regions appeared to have basic inadequacies. The nodal region seemed better suited to the new socio-economic conditions currently exhibited in American life. Content analysis of a number of state planning delineation documents revealed that the nodal region was indeed favored by state planners.

Unless a positive implementation policy is undertaken by the state planner, his delineation program will become nothing less than a futile academic exercise. This implementation policy has three aspects: getting the regions recognized and accepted, organizing the regional planning agency, and staffing the agency. All three levels of government, local, state and federal need to recognize the regions. The best strategy to use in gaining this recognition is direct and personal contact by the state planner with interested parties. Opposition to the regions will probably be unorganized and can be overcome successfully by diplomatic maneuvering on the part of the state planner.

State planners were divided on the financing and structuring of regional planning agencies but a majority favored some advisory unit attached to a confederation of local government units. State planners would like to see the agencies financed by state and local funds thereby lessening dependence on federal aids.

The "core" staff of a new regional planning agency could center around: a regional planner, an economist, a public

administrator, and a city planner.

For the technically-inclined reader, Appendix III presents analyses of state planning agencies' delineation documents and proposes a suggested delineation methodology based on the nodal region-type. Part I of the Appendix deals with the selection of the nodal point and utilizes the economic concept of the "growth point". Part II examines possible criteria which might be used to delimit boundary lines of the nodal region. The travel-time concept is advocated as a single criteria representing a host of variables in this respect.

B. Further Research Needs.

While reviewing the literature for this thesis, the author noted several areas in which additional research might be fruitful. The literature on state and regional planning is rather minuscule compared to the work done in other academic disciplines. Some of the questions which occurred to the author are mentioned briefly below in hopes that others will eventually seek the answers.

Theoretically, the role or relationship of state planning to the administration of state government needs to be defined and its implications drawn out. The appropriate relationship between state planning and regional planning agencies also needs clarification.

Confusion exists as to the appropriate planning levels for various types of planning functions; i. e., should zoning

powers be given to regional planning agencies or retained by local governments? An attempt to classify planning functions into a hierarchical order which would apply to hierarchical planning levels would be a significant contribution to the planning literature. Which functions are unique to one planning level and which need to be shared jointly by several levels?

What are the implications of the major purposes of regional planning for the educational curriculums of planning schools? Is the student regional planner acquiring the administrative, co-ordinative, political, and human relations skills he will need in carrying out the major purposes of regional planning?

Above all else, the literature needs hundreds of empirical case studies exploring the organization, operations and successes or failures of sub-state regional planning agencies. Which type of regional agency seems most successful in the American political system? Will the Council of Governments, the federal-local economic development districts, or the state-designed regions have more success in promoting overall, comprehensive regional development? What differences exist in structure, character, personnel and policies between successful regional agencies and unsuccessful regional agencies?

Is the regional planning agency the first step toward regional government or a method to save avchaie county and

city governments from extinction? What will be the effect of multi-state compacts and multi-state regional development commissions, such as Ozarkia and Appalachia, on the concept of state sovereignty? Regional planning is in its infancy and offers a fascinating opportunity for scholars to observe and report on its growing pains.

APPENDIX I

THE QUESTIONNAIRE USED IN THE SURVEY OF STATE PLANNING DIRECTORS

1. Year of Birth _____.
2. What is your highest academic degree? _____.
3. What was your major field of study? _____.
4. How many positions is the director of state planning down on the organizational chart from the governor? _____.
5. Please give me a short job history listing the major positions you have held. _____.
6. Based on your own knowledge and experience in the field of regional planning, what do you feel should be the major functions of a multi-county, regional planning agency? _____.
7. What major functions are currently being performed by existing regional planning agencies in your state? _____.
8. Is the current emphasis on regional planning in your state mainly the result of the pressures from: (Please rank in order of importance) _____ A. Local cities having expansion and growth problems. _____ B. State efforts to achieve some basic co-ordination in its over-all development programs. _____ C. Federal grant-in-aid programs which require some form of regional planning or area-wide functional planning. _____ D. Other - Please explain below: _____.
9. Your agency has prepared a suggested regional delineation for your state. You are, I am sure, quite aware that attempts by the state to establish multi-county, regional planning

agencies, if based on these regional delineations, would produce both support and resistance in a number of places. To help you to more easily visualize this problem and to give us some "insight" as to the "climate" for regional planning in your state, please consider, if you will, the following, imaginary situation:

Your state legislature passes a statute authorizing your agency to set up multi-county, regional planning agencies based on your agency's previously delineated regions. The statute authorizes voluntary regional planning councils composed of local governmental representatives and a planning staff financed by local government assessments matched by a 50% state grant. The functions of the regional planning agency are to be determined by the local government council. As your agency went about the process of organizing local governmental support for regional planning and setting up the new agencies, proponents and opponents of regional planning, based on your regions would likely appear. Based on your own knowledge and experience in this state, where, and from what groups, would you expect to find support or resistance to your setting up of regional planning agencies in your delineated regions?

A. What resistance or support would you find in local areas to your regional delineations and regional planning agencies? _____.

B. What support and what resistance would you expect to find at the state level to your regional delineations and regional planning agencies if you tried to designate them as uniform service areas for all state government programs? _____

C. What support for, and what resistance would you expect to find at the federal level to your regional delineations and regional planning agencies? _____.

10. If you had a limited budget and you were asked to set up and staff a brand-new, multi-county, regional planning agency, which of the following occupations would you consider as part of a primary or "core" staff in your recruitment process and which would you consider as auxillary or "secondary" staff? Please place a "P" for primary and a "S" for secondary in front of the occupations listed below:

_____ Economist	_____ Civil Engineer
_____ Architect	_____ Urban Designer
_____ Public Administrator	_____ Lawyer
_____ Public Finance Analyst	_____ Political Scientist
_____ Social Worker D. S. W.	_____ Public Relations Specialist
_____ City Planner	_____ Regional Planner
_____ Statistician	_____ Geologist
_____ Agronomist	_____ Natural Resource Analyst
_____ Geographer	_____ Sociologist
_____ Anthropologist	_____ Hydrologist
_____ Others - Please List Below:	

11. What was the major reason that induced your agency to undertake a delineation of the state's regions when you did? _____

12. In your opinion, how should a regional planning agency be structured and financed? _____.

13. Could you give me an educated guess as to the length of time it will take before your state will be completely divided into active multi-county, regional planning agencies?

A. _____ Time Period B. _____ Don't Know C. _____ Never.

14. Based on your own knowledge and experience in the field of regional planning, which of the following types of planning regions do you feel would be most easily organized for regional planning purposes in your state? (Which region-type has the best chance of being accepted by local governments and local interests?).

A. _____ A nodal region consisting of a major central city and its surrounding hinterland areas.

B. _____ A uniform region containing several counties which have common or homogeneous socio-economic or natural characteristics.

C. _____ Regions based on some administrative criteria such as a minimum population size, a minimum number of counties, a maximum geographical size, a convenient size for administrative control, etc.

D. _____ Other -- Please explain below:

15. In your opinion, what would be the optimum strategy to use in gaining support for active regional planning in your state?

16. Do you feel that regional planning agencies are the first step towards the eventual consolidation of county and city units in your state? _____ Yes _____ No _____ Other

17. What trends or what emerging patterns do you think will occur in regional planning in your state in the near future?

APPENDIX II

A COMPARISON OF THE AMERICAN INSTITUTE OF PLANNERS' OCTOBER, 1966 SURVEY OF REGIONAL DELINEATIONS BY STATE PLANNING AGENCIES AND THE SURVEY UNDERTAKEN BY THE AUTHOR DURING SPRING AND SUMMER, 1967.

State	1966 AIP Survey	1967 Author's Survey
Alabama	No Regions	No Regions
Alaska	Regions	Regions Under Revision
Arizona	No Regions	No Regions
Arkansas	Regions	Regions
California	Regions	No Reply
Colorado	Regions	No Reply
Connecticut	Regions	Regions
Delaware	No Regions	No Regions
Florida	No Regions	Delineation Underway
Georgia	Regions	Regions
Hawaii	No Regions	Regions
Idaho	No Regions	No Regions
Illinois	No Regions	Delineation Document
Indiana	Regions	Regions Under Revision
Iowa	No Regions	Delineation Underway
Kansas	Regions	Regions
Kentucky	No Regions	Regions
Louisiana	Regions	Regions
Maine	Regions	Regions
Maryland	No Regions	No Regions
Massachusetts	Regions	No Reply
Michigan	Regions	Regions Under Revision
Minnesota	Regions	Regions
Mississippi	No Regions	Regions
Missouri	Regions	Regions
Montana	No Regions	No Regions
Nebraska	No Regions	No Regions
Nevada	Regions	Regions
New Hampshire	Regions	Regions
New Jersey	No Regions	Delineation Document
New Mexico	No Regions	No Regions
New York	Regions	Regions
North Carolina	Regions	No Reply
North Dakota	No Regions	Delineation Underway

State	1966 AIP Survey	1967 Author's Survey
Ohio	Regions	Regions
Oklahoma	Regions	Regions
Oregon	No Regions	Delineation Underway
Pennsylvania	Regions	Regions
Rhode Island	No Regions	No Regions
South Carolina	No Regions	No Regions
South Dakota	Regions	No Regions
Texas	No Regions	No Regions
Tennessee	Regions	Regions
Utah	Regions	Regions
Vermont	Regions	Regions
Virginia	No Regions	No Regions
Washington	No Regions	Delineation Underway
West Virginia	Regions	Regions
Wisconsin	Regions	Regions
Wyoming	No Regions	No Regions

SUMMARY OF THE DIFFERENCES IN THE TWO SURVEYS

Number of States Involved	1966 AIP Survey	1967 Author's Survey
5	No Regions	Delineation Underway
4	Regions	No Reply
3	Regions	Regions Under Revision
3	No Regions	Regions
2	No Regions	Delineation Documents
1	Regions	No Regions
<u>18</u>		

APPENDIX III

A SUGGESTED DELINEATION METHODOLOGY

PART I: SELECTION OF THE NODAL REGION'S CENTRAL LOCUS

A. Purposes.

The major point established in Chapter IV was the apparent utility of the nodal region for the major purposes of regional planning. This assumption seemed supportable, both from a theoretical viewpoint, and from the delineation practices of state planning offices. In Appendix III, an attempt will be made by the author to answer certain methodological questions which cannot be avoided when the planner-delineator decides to use the nodal concept. Which of the many urban centers in a geographic area should be designated as the urban centers of the proposed regions? What criteria best serves to delineate the boundaries of these centers' influence over their surrounding hinterlands?

Appendix III presents a suggested delineation methodology which the author feels will simplify the delineation process. It is contended that the region produced by this methodology is valid and viable.

B. The Nodal Center as A Regional Growth Point.

Even in depressed agricultural or mining regions of our country, and in sparsely populated sections of the Great Plains and the West, certain urban centers have experienced a slow, steady growth while nearby smaller centers are decay-

ing and dying. Economists, notably Albert Hirschman¹, have referred to these growing urban centers, even in lagging regions, as "growth points" or "growth centers".

The growth center has a dynamic urban quality (excitement and opportunity) about it that attracts the major sources of population growth: young people, the better educated, and the higher income occupations. This growth center acts as a transshipment point. The raw materials and products of the immediate region are assembled at this center; either for local manufacturing and processing, or else for shipment to manufacturing units in exogeneous regions. In turn, the center acts as a wholesale agent for the region. Goods and services from the entire national economy are funnelled into the center and are distributed to the consumers in the nearby hinterlands.² The growth center acts as an intermediary or direct linkage between the surrounding rural, economically less advanced hinterlands and the highly advanced, national economy.³

Thus the growth point becomes a major trade, service and social center for the region. In addition, it serves as a

¹Albert O. Hirschman, The Strategy of Economic Development (New Haven: Yale University Press, 1958), Chapter 10.

²Brian J. L. Berry, "Reflections on the Functional Economic Areas," Research for Regional and Area Development, p. 57.

³The Role of Growth Centers in Regional Economic Development, Department of Economics (Ames: Iowa State University, 1966), pp. i-iv.

major source of new employment, a high wage employment, for those in the region seeking to move out of farming or dying occupations. The main forms of communications are located in the growth center and they help to spread the center's influence over the hinterland. The growth center is favored by a superior transportation network connecting it with its consumer hinterlands and with the national markets. Usually, larger governmental service agencies have branch offices or representatives located in these convenient growth points.¹

The growth center has certain advantages because of its internal and external economies of scale. These economies, such as multiple producing units, massings of reserves, bulk transactions, skilled labor pools, business services, agglomeration economies, etc., create an environment that is conducive to increased economic development and the concentration of economic activity around the growth point. Those economists who adhere to the growth point concept feel that additional growth in the center will eventually benefit the hinterland areas in a trickle-down fashion; i. e., more employment, better goods and services, higher wages and incomes will spread out to the more rural populations.²

¹Ibid.

²Hirschman, p. 183-193; also see Robert A. Harper, Theodore H. Schmuddle, and Frank H. Thomas, "Recreation Based Economic Development and the Growth Point Concept," Land Economics, XLII (February, 1966), 95-101.

C. Operationalizing the Growth Point Concept for the Purposes of The Delineation Methodology.

The determination of growth points from among several hundred urban places of various sizes and compositions could be a difficult (and politically dangerous) task. Numerous approaches have been advocated by scholars to rank cities in their order of importance. Many of these approaches have their theoretical roots based in central place theory. The most prominent of these ranking systems involve attempts to create city hierarchies based on functions. The higher a city ranks in the functional hierarchy, the larger and more diversified will be its total number of goods and service establishments.¹

Two state planning offices have utilized a city ranking formula in their recent delineation programs. Their rankings

¹Brian Berry defines seven levels of cities based on functions: hamlets, villages, towns, small cities, regional cities, regional metropolis and national metropolis. Regional city is the most appropriate center node for delineation purposes. Geography of Market Centers and Retail Distribution, p. 16. Researchers at the University of Minnesota, in analyzing the economy of the Upper Mid-West, used a six level hierarchy of cities based on business functions offered: minimum convenience, full convenience, partial shopping, complete shopping, secondary wholesale-retail and primary wholesale-retail. John R. Borchert and Russell B. Adams, Trade Centers and Trade Areas of the Upper Midwest, Urban Report No. 3, Upper Midwest Economic Study (Minneapolis: University of Minnesota, 1963). The Minnesota Study was used by economist Robert Antonides for regional delineations in South Dakota. Antonides advocated the use of complete shopping centers as the central nodes for his regions - see Antonides, p. 4.

were based on a series of aggregated criteria. In the New Jersey study, total population, retail services, financial assets, mass media, telephone calls and traffic volumes were considered in setting up four classes of cities. The Class III cities appeared most feasible for central nodes.¹ The Tennessee State Planning Office used an involved mathematical formula to determine relative growth potentials between cities in the Appalachian areas of the State. The main factors considered were: population characteristics: sizes, densities, residences, past and expected growth; locational advantages: such as nearness to inter-states and major metropolitan or industrial cities; income measures: such as the growth in value, and degree of concentration, of median family incomes; employment characteristics and growth; and the degree of growth in manufacturing activities.²

The state planning offices of Washington and Oklahoma selected nodal centers on the basis of minimum population standards. In the State of Washington's delineations, urban centers were selected which had a minimum population of 10,000 in their incorporated areas and 15,000 population in their

¹State of New Jersey, Department of Conservation and Economic Development, Division of State and Regional Planning, The Setting for Regional Planning in New Jersey, pp. 52-53.

²State of Tennessee, State Planning Office, Appalachian Regional Development Act of 1965, A Rationale and Model for Its Application in Tennessee (Nashville, 1965), p. 77.

immediate urban areas. The total regional population had to exceed a total of 50,000 people.¹ Oklahoma used a single criteria; the growth center had to be a city with a population of 10,000 or over.²

One of the more interesting approaches used in detecting growth centers is a method advocated by geographer William Siddall. He analyzed the collecting, distributing and service functions performed by urban centers for their surrounding territories and concluded that statistics dealing with wholesale and retail sales and employment in the urban centers would indicate the relative importance of the centers to their surrounding areas. Retail and wholesale sales per capita are one measure of the urban center's centrality but these indices could be distorted by variations in the per capita income of the region. Siddall therefore advocated the use of employment statistics as a more reliable indicator of central importance. His suggested methodology was to compare national percentages of wholesale workers to combined totals of wholesale and retail workers in the United States. If the percentage of wholesale workers to total wholesale-retail workers in an urban center exceeded the national averages,

¹State of Washington, Department of Commerce and Economic Development, State Planning Section, "Regions in Washington," (Unpublished draft copy for staff use, October, 1966), p. 24.

²Charles H. Little, "Recent Area Development Concepts With Application to Oklahoma," Oklahoma Current Farm Economics, XXXIX (March, 1966), 7-9.

the percentage above national figures "represents" the workers serving the hinterland areas. The higher the percentage above, the higher the urban place's centrality.¹ In this vein, the State of Minnesota's delineation document used the volume and value of retail trade sales to locate urban centers for their regions.²

Any of these afore mentioned approaches might well serve to delineate growth points for nodal regions. However, the ranking of cities by numbers and diversity of business functions, or the ranking of cities by percentages of wholesale workers, appears to be suitable for the purposes of the author's delineation methodology. These two approaches could be applied, and the necessary rankings developed, within a short time period. Statistical data is readily available.

¹William R. Siddall, "Wholesale-Retail Trade Ratios as Indices of Urban Centrality," Economic Geography, XXXVII (April, 1961), 124-132.

²State of Minnesota, State Planning Agency, Minnesota Economic Regions: Their Delineation, Description, and Development Potential (St. Paul, 1965), p. 9.

PART II: SELECTING CRITERIA USEFUL IN DELINEATING THE BOUNDARIES
OF SUB-STATE PLANNING REGIONS AND A DEMONSTRATION OF THE SUGGESTED
DELINEATION METHODOLOGY

A. Delineation Criteria Currently Used by State Planning
Offices.

The content analysis of the twenty five state delineation documents, referred to in Chapter IV (see Table 7, page 66), also revealed twenty five basic groupings of delineation criteria. Each of these twenty five criteria groupings had been advanced by state planners as major factors to be considered in their delineation methodologies. Table 17 (page 108) presents a detailed breakdown of the twenty five delineation criteria groupings. For purposes of clarification and understanding, the twenty five criteria were further divided by the author into three general classes: (a) thirteen socio-economic factors, (b) six natural geographic factors, and (c) six political or administrative factors.

The criteria groups ranking among the top third in Table 17 were predominantly associated with the urban centers and their influences over their hinterland areas: service and market areas, transportation networks, labor markets, etc. Five, or thirty eight percent of the thirteen factors in the socio-economic class, were located in the top third. The geographic and the political-administrative classes each had one out of six factors, or seventeen percent, in the top

TABLE 17

THE MAJOR CRITERIA UTILIZED BY TWENTY FIVE STATE PLANNING OFFICES
IN DELINEATING THEIR SUB-STATE PLANNING REGIONS

Delineation Criteria	Basic Class*	Number of State Planning Offices Using These
<u>Top Third:</u>		
1. Urban centers and SMSAs	A	20
2. Service and retail market areas	A	14
3. The transportation net- work and traffic flows	A	14
4. Labor markets and commuting patterns	A	13
5. County units	C	12
6. Population densities and character	A	11
7. River basin and water- sheds	B	11
<u>Middle Third:</u>		
8. Newspaper and mass media distribution patterns	A	10
9. Similarities in agricul- tural land use patterns	B	10
10. Existing planning areas	C	10
11. Percent of the labor force in industrial employment	A	8
12. Natural resource similarities	B	8
13. Census and state administrative units	C	8
14. Telephone message patterns	A	6
15. Industrial production similarities	A	6
16. Historical socio- political interrelation- ships	C	6
17. Urban growth centers - ranked into a hierarchy	A	6

Delineation Criteria	Basic Class*	Number of State Planning Offices Using These
<u>Bottom Third:</u>		
18. Mountain barriers	B	5
19. Similar soil types	B	5
20. Existing political co- op patterns	C	4
21. Regions used by private organizations	C	4
22. Similarities in income character	A	3
23. Migration patterns	A	3
24. Cultural similarities	A	3
25. Similarities of climate	B	2

*Class Types: A = socio-economic criteria
 B = Natural geographic criteria
 C = Political and administrative criteria

third. Significantly, the county unit, a political factor, and the watershed basin, a geographic factor, were represented in the upper third. Both of these criteria are relatively easy to use and to locate upon a map.

Criteria of secondary importance were placed in the middle third in Table 17. The political-administrative class held a predominant percentage here (fifty percent of total class factors). The socio-economic class (thirty eight percent) and the geographic class (thirty three percent) shared about equally in the secondary units. Factors such as existing planning areas, administrative areas, and historical-political relationships assumed importance in these secondary groups. Urban influences and industrial categories were taken from the socio-economic class. Natural resource and agricultural similarities were taken from the geographic class.

The least mentioned delineation criteria group, the bottom third in Table 17, were found predominantly in the geographic class (fifty percent). The political-administrative class contributed thirty three percent and the socio-economic class contributed twenty three percent to this bottom group.

In overall order of importance, the urban oriented, socio-economic class of criteria ranked first, historically evolved political and administrative class criteria ranked second, and natural geographic phenomenon ranked third.

The top ranked criteria in Table 17 suggests that some form of aggregated criteria, based on the urban center and

its influences over the hinterland, might be the best approach to delineation. This method has been advocated by geographer Robert Dickinson.¹ Aggregated criteria influence lines are drawn on the map and a single composite boundary line is created. The use of a composite boundary requires the accumulation of several varieties of data from divergent sources. The composite boundary methodology entails a sizeable investment in planning man-hours in order to transpose the data into separate map overlays. This series of map overlays must, in turn, be harmonized and reduced to some aggregate mean boundary line.

It is the intention of the author, through his suggested delineation methodology, to present an attractive alternative approach to delineation. His methodology assumes that a single delineation criteria, travel time, represents adequately an entire range of spatial interactions that occur between the urban center and its hinterlands. The methodology requires a minimal amount of data collection and far fewer planning man-hours than the composite boundary approach.

C. Transportation Networks and the Region.

The urban center spreads out its influence in a circular fashion to the small town and rural areas in its hinterland, primarily over the existing transportation web or network.

¹Dickinson's technique is discussed in Chapter II of this thesis.

The expressways, highways and farm-market roads are channels of interaction and movement. All-weather, direct highway links to the urban center have had a profound effect on American rural areas. Even in the early 1920s when the automobile was just coming into its own and the condition of America's road system was chaotic, certain alert rural sociologists were predicting the future impact of better roads and faster automobiles upon the rural patterns of life. Sociologist R. D. McKenzie was one of the more observant writers on this theme:

"In other words, the automobile, by providing every village and almost every farmstead with rapid transportation, has converted the entire country into an urban pattern of home and service center distribution."¹

Recent empirical studies have reaffirmed McKenzie's original observations. Brian Berry's research in the rural Midwest has shown clearly how the spatial patterns between central places and hinterland market centers are indissolubly linked to the existing transport networks. The rural feeder road system links low order centers to high order centers and the major highway trunk lines link higher order centers to each other. The higher the order of an urban center, the greater will be the convergence of routes from surrounding hinterlands. In addition, Berry discovered a correspondence between the density of purchasing power in the areas sur-

¹R. D. McKenzie, "Spatial Distance and Community Organization Pattern," Social Forces, V (1927), 625.

rounding the central city and the density of the areas' transport networks.¹

McKenzie's and Berry's observations have been echoed in studies undertaken by traffic engineers and economic development specialists:

"What emerges from the rural [traffic] studies is a picture unfamiliar to urban planners and traffic engineers . . . considered over the rural countryside only, we find the large employment centers, particularly the factories, to be very important in the present-day rural economy. For over half the cases tested, the families in the open-country area must be considered residents of an exurbia, the hinterland of metropolitan dependence."²

The intimate relationships between the central city and its hinterland become most evident when the transportation network is experiencing a period of flux or change. The improvement of an existing highway or the creation of a new super-highway dramatically affects the socio-economic patterns in

¹Berry, Papers and Proceedings of the Regional Science Association, IV, 114.

²Howard S. Lapin, Structuring the Journey to Work (Philadelphia: University of Pennsylvania Press, 1964), p. 31.

the urban core and in the hinterlands along the route.¹

D. The Transportation Network and Travel Time.

The central core is dependent upon its transportation network to provide an uncongested path for the movement of goods, materials, services and workers between the core and its hinterlands. The actual distance which a dependent hinterland extends out from the core could be measured in a number of ways. Distance expressed as miles upon a map can be misleading. Again, Sociologist McKenzie recognized this fact back in the twenties:

"The maximum zone of patronage or degree of centralization possible for any service center is, in the last analysis, determined by the time-cost factor in overcoming distance."²

¹Among the varied effects upon the city's region created by improved highways are: the alteration of trade areas with a decrease in trade for the smaller centers and an increase in trade for the large centers. The influence area of the central city also expands with each improvement. See Edward Ullman, "A Theory of Location for Cities," American Journal of Sociology, XLVI (1941), 861; William L. Garrison, "Connectivity of the Interstate Highway System," Papers and Proceedings of the Regional Science Association, VI (1960), 121 and Hans Blumenfeld, "The Modern Metropolis," Scientific American (September, 1965), 74. A countervailing trend, encouraged by highway improvements, is the general economic growth in rural areas which lie along the improved routes. This growth takes several forms: suburban development, industrial decentralization, increased land prices, better access to markets, increased business transactions of all types in the area, new employment, etc. See Mandelker, pp. 964-69; The Role of Growth Centers in Regional Economic Development, pp. 26-27, and E. H. Holmes, "The Impact of Highways on Economic Development," American Highways, XLVI (April, 1967), 27.

²McKenzie, Social Forces, V, 626.

More recently, the functional economic areas of theorist Karl Fox was constructed upon a temporal theme which he imposed on the rectangular road-grid system of Iowa thereby producing a diamond shaped region:

"The tendency to minimize commuting and shopping travel time will exist even in areas that are badly broken up by mountains and rivers. The most basic pattern is not a spatial one but a temporal one. People tend to arrange themselves in concentric circles around the center of their labor market area, with 'distance' from the center measured in terms of minutes."¹

Within the concept of the functional community discussed in Chapter IV, commuting behavior, both for work and for shopping, represents a practical measure of the voluntary choices that people make in seeking both private goods and services. The living area or "life space" of the hinterland dweller is vitally affected by the time-distance he must travel to obtain needed goods and services. The attraction of competing urban centers of similar size is usually decided, from the viewpoint of the consumer, in favor of that center which can be visited, and returned from, with the least time and effort. Hinterland boundary lines between competing centers become intimately associated with the ease of travel which the traveller experiences on his average trip to and from the respective urban cores.

¹Karl A. Fox and T. Krishna Kumar, "The Functional Economic Area: A New Way of Looking at Familiar Things," Research and Education for Regional and Area Development, p. 22.

The importance of travel time has been noted in a number of theoretical and empirical studies. Economists have analyzed time as an economic cost, both in productive and consumptive functions:

" . . . not only commercial transactions but human activity generally is completely conditioned by the element of time. . . . Economic activity arises from efforts to satisfy human wants via a productive-consumption function . . . the time in transit of men and materials in this process is a period of suspended satisfactions. The desire to shorten this time in transit follows logically."¹

Economists have found that the probable success of new shopping centers² and the growth and decay cycles among neighboring cities in a region³ are all intimately linked to the travel time characteristics between the shopping center or city and their hinterland, consumer population.

Traffic engineers have noted that travel-time is an accurate and effective measurement of congestion levels on

¹Herbert Ashton, "The Time Element in Transportation," American Economic Review, XXXVII (May, 1947), 424. Ashton sees eight direct economic gains derived from improvements in travel-time: (1) reduction of inventories (2) reduction of capital frozen in transit (3) reduction of distribution costs (4) widening of the market area (5) widening of sources of supply (6) improved control over price and supply (7) more effective control programming and (8) improved turnover in stocks.

²David L. Huff, "A Probabilistic Analysis of Shopping Center Trade Areas," Land Economics, XXXIX (February, 1963), 86.

³Berry, Geography of Market Centers and Retail Distribution, pp. 10-13.

the urban transport networks.¹ Highway studies have shown that the motorist, in choosing his route to work, or in selecting his route for shopping, is heavily influenced by the time he expects to spend in going to and from his destination. The motorist tends to select that route having the greatest ease of driving and the shortest travel time, even though an alternative route may be shortest in terms of miles to travel.²

Numerous factors are involved when a motorist is estimating his travel time. First, the motorist will likely consider the portal-to-portal time involved in his proposed trip; i. e., time from his doorstep, over the route time, time spent in parking the car, and the time spent going from the parking area to the desired destination.³ Thus travel time becomes more than just distance travelled per minute. From the viewpoint of the motorist, the commuter, and the shopper, travel time is a factor conditioning their psychological perceptions of the ease or difficulty they expect to encounter in reaching a particular geographic point; i. e., the point's

¹Edward M. Hall and Stephen George, "Travel Time - An Effective Measure of Congestion and Level of Service," Highway Research Board Proceedings, XXXVIII (1959), 529.

²Darel L. Trueblood, "The Effect of Travel Time and Distance on Freeway Usage," Public Roads, XXVI (February, 1952), 242-47; Lapin, p. 38; Brian Martin, Frederick W. Mennott, and Alexander J. Bone, Principles and Techniques of Predicting Future Demands For Urban Area Transportation, Report No. 3 (Cambridge: MIT Press, 1966), p. 158; and U. S. Bureau of Public Roads, p. II-4.

³Travel in the Boston Region, 1959-1980, Vol. II, Seminar Research Bureau (Boston: Boston College, 1961), p. 45 and U.S. Bureau of Public Roads, p. II-2.

accessibility. Research psychologists, working in the area of perception, have scientific evidence that man often reacts to objective situations in a highly personal and subjective manner. Man's perception of reality may be badly distorted by subjective values he adheres to. His solutions to the problems he faces, based on his psychologically perceived definition of the problems, may appear illogical from the viewpoint of an objective bystander. However, man takes action upon the world he perceives, not upon the world of the objective bystander.¹

Various factors can, and do, affect the psychological perceptions of distance, time and accessibility. On the negative side, heavy traffic or congestion and a scarcity of parking, if associated with a particular route, will add inconvenience, discomfort and exasperation to the motorist's psychological impressions of the time and effort required to reach a point on that route.²

¹Jerome Brunner and Cecil Goodman, "Value and Needs As Organizing Factors in Perception," Journal of Abnormal Social Psychology, XLII (1947), 25-41 and John Tisdale, "Psychological Value: Theory and Research, 1930-1960" (Unpublished Ph.D. dissertation, Boston University, 1961), pp. 5-6.

²Wilfred Owen, The Metropolitan Transportation Problem (Wash. D. C.: The Brookings Institution, 1966), pp. 12-19; Huff, Land Economics, XXXIX, 85-86; Lapin, p. - Introduction; and Gerald A. P. Carrothers, "An Historical Review of the Gravity and Potential Concepts of Human Interaction," Journal of the American Institute of Planners, XXII (April, 1956), 94.

On the other hand, positive psychological and economic benefits can be derived by the motorists from the ability to maintain a high average rate of speed over his chosen route. A smooth, easy flow of traffic with few stops along a route increases the value a motorist assigns to that route and decreases the psychological effort required to reach a point on that route.¹

While travel time itself is not an all-inclusive measure of a motorist's psychological perceptions of distance, it does appear to serve well as an average indicator of the physical and psychological resistances the average motorist must meet along a specific route. Groundbreaking studies in this area indicated that a significant relationship did exist between the time involved in commuting to work and workers' psycho-

¹Research indicates that the physical costs to motorists of delays caused by stopping or idling in heavy traffic amount to \$0.026 per passenger vehicle/minute and \$0.05 per truck/minute - see Hall and George, Highway Research Board Proceedings, XXXVIII, 521. The psychological savings in time and frustration are immense on limited access freeways as compared to congested two lane highways - see William Johnson, "Travel Time and Planning," Traffic Quarterly, X (January, 1956), 70-72 and American Manufacturers Association, Transportation and Parking for Tomorrows' Cities (New Haven: Wilbur Smith and Associates, 1966), pp. 85-87. Empirical studies have shown that people are willing to travel further in areas which have lower population densities and less highway congestion - see Berry, Geography of Market Centers and Retail Distribution, pp. 34-35. They will travel further if the trip is on all-weather, paved roads - see Berry, Barnum, and Tennant, Papers and Proceedings of the Regional Science Association, IX, 98.

logical attitudes, negative or positive, toward commuting.¹

E. Operationalizing the Travel Time Concept.

"Of the many factors which determine the changing structure of our metropolitan areas, one is increasingly considered by those concerned with the future of our cities, travel time. Formerly distance was measured in miles, today we think in terms of minutes and convenience, and to the traditional three dimensions of planning we must now add the fourth, time."²

Assuming that travel time is an encompassing criteria which could be used to represent the degree of interaction occurring between the nodal center and the boundaries of the hinterland areas, two questions necessarily arise: (1) How far (in minutes over the transportation network) is the effective dominance of the central node felt in the hinterland areas? (2) How do we allow for the psychological frustrations created by various forms of congestion on the transport network which act to decrease the effective reach of the central core?

A consensus appears to exist among several authors that most interaction between the node and the hinterland occurs within the first 30-45 minutes out from the center, but they

¹William R. Shriver, "The Relationship of Time Involved in Commuting to Commuting Attitude," (Unpublished Master thesis, University of Oklahoma, 1965), pp. 14, 27 and 30. Shriver's study indicated a negative reaction to commuting occurred in the 30 to 40 minute travel time period. This negative reaction held across a whole series of social, economic and distance factors. Among commuters traveling less than 30 minutes to work, the psychological reactions were positive.

²Johnson, Traffic Quarterly, X, 68.

add that this interaction remains fairly intense up to, at least, one hour's travel time distance.¹

For the purposes of the author's suggested delineation methodology, the boundary limits of the nodal region will be represented by one hour's travel time over the existing highway network out into the hinterlands. In sparsely populated areas of the West and Midwestern United States, this travel time limit might well be expanded to 75 or 90 minutes. This would allow large, low density areas to be part of nodal regions which have urban centers possessing a sufficient variety of goods and service establishments.

The problems of psychological frustrations encountered during the process of traveling are more difficult to quantify. For the purposes of the author's methodology, statistics were obtained from the Tennessee State Highway Department. These statistics were the result of empirical time tests carried out by that Department on the State's road system. The methodology assumes that the average speed statistics reflect: (1) the condition of the highway and (2) the traffic density on the highway. The congestion created by various size urban places along the highway route were also considered in computing total travel time. Table 18 presents the travel time, speed and congestion statistics for the State of Tennessee

¹Johnson, *Traffic Quarterly*, X, 74; Blumenfeld, *Scientific American*, 64-66; McKenzie, *Social Forces*, V, 626; Fox and Kumar, p. 18; Antonides, p. 9; and *The Role of Growth Centers in Regional Economic Development*, p. 7.

which the author used in his delineation methodology. The average speed and congestion statistics were applied to all paved highways leading out of the central cities.

TABLE 18

AVERAGE SPEED AND CONGESTION STATISTICS USED IN THE DELINEATION
METHODOLOGY

Types of Routes	Average Speed
1. Interstate (limited access)	60 mph
2. Divided four lane highway	55 mph
3. Interstate (through city limits)	50 mph
4. Two lane highway	50 mph
5. Dustless state highways	40 mph
Congestion Factors (Except for Interstates)	Time Through
1. Towns 0-250 population	allow 1 minute
2. Towns 251-1000 population	allow 2 minutes
3. Towns 1001-2500 population	allow 3 minutes
4. Towns 2501-5000 population	allow 4 minutes
5. Cities 5001-10,000 population	allow 5 minutes
6. Cities 10,001-25,000 population	allow 7 minutes
7. Cities over 25,001 population	Average 25 mph inside city limits
8. Ferry crossings	allow 15 minutes

F. Demonstration of the Suggested Delineation Methodology:

The Case of Tennessee.

The Tennessee State Planning Office in 1965, delineated five regions in the eastern part of Tennessee which had been designated eligible for federal assistance under the Appalachian Regional Development Act of 1965. The regions

were created out of several map overlays and the boundaries of the regions represented an aggregated mean drawn from an extensive series of data. Among the criteria utilized were: the extent of urbanization, commuting patterns, trade area characteristics, transportation networks, geographic barriers, homogeneity characteristics, economic base characteristics and population distribution.¹

All urban places over 1,000 population in Appalachian Tennessee had been ranked by growth potential (see page 104 of this Appendix). Taking the highest ranking urban center in each of the regions as being the growth point, the author applied the travel time technique (see Table 18) to Tennessee's Appalachian Regions. On a large state highway map (1 inch= 8 miles), one hour's travel time (average route speed plus congestion factors along the route) was traced out from the city limits of the growth center on all paved highways.

The methodology created regions which were a cross between a diamond shaped square and a star fish design. The rugged terrain of Tennessee's Cumberland Plateau and the Appalachian Mountain chain probably accounted for certain irregularities in the transport network. Plates I through V following this section represent the results of this demonstration for each of Tennessee's five regions.

¹State of Tennessee, State Planning Office, pp. 45-46.

The original regions derived from aggregated criteria (hundreds of staff man-hours were spent in gathering data and creating map overlays for those delineations) and the regions created by one hour's travel time methodology are quite similar in shape and geographic area. The staff time involved in the methodology was minimal: two men working two days with the aid of a simple map measurer and a calculator.

The areas of the original regions covered by the travel time regions are similar. The approximate comparison: Knoxville Region - 88%; Upper Cumberland Region - 82%; Lower Cumberland Region - 80%; The Tri-Cities Region - 75%; and the Chattanooga Region - 67%.

EXPLANATION OF PLATE I

The Chattanooga Planning Region

The area inside the heavy black line is the travel time region.
The area inside the thin black line with cross bars is the original region.

EXPLANATION OF PLATE II

The Knoxville Planning Region

The area inside the heavy black line is the travel time region.
The area inside the thin black line with cross bars is the original region.

PLATE II

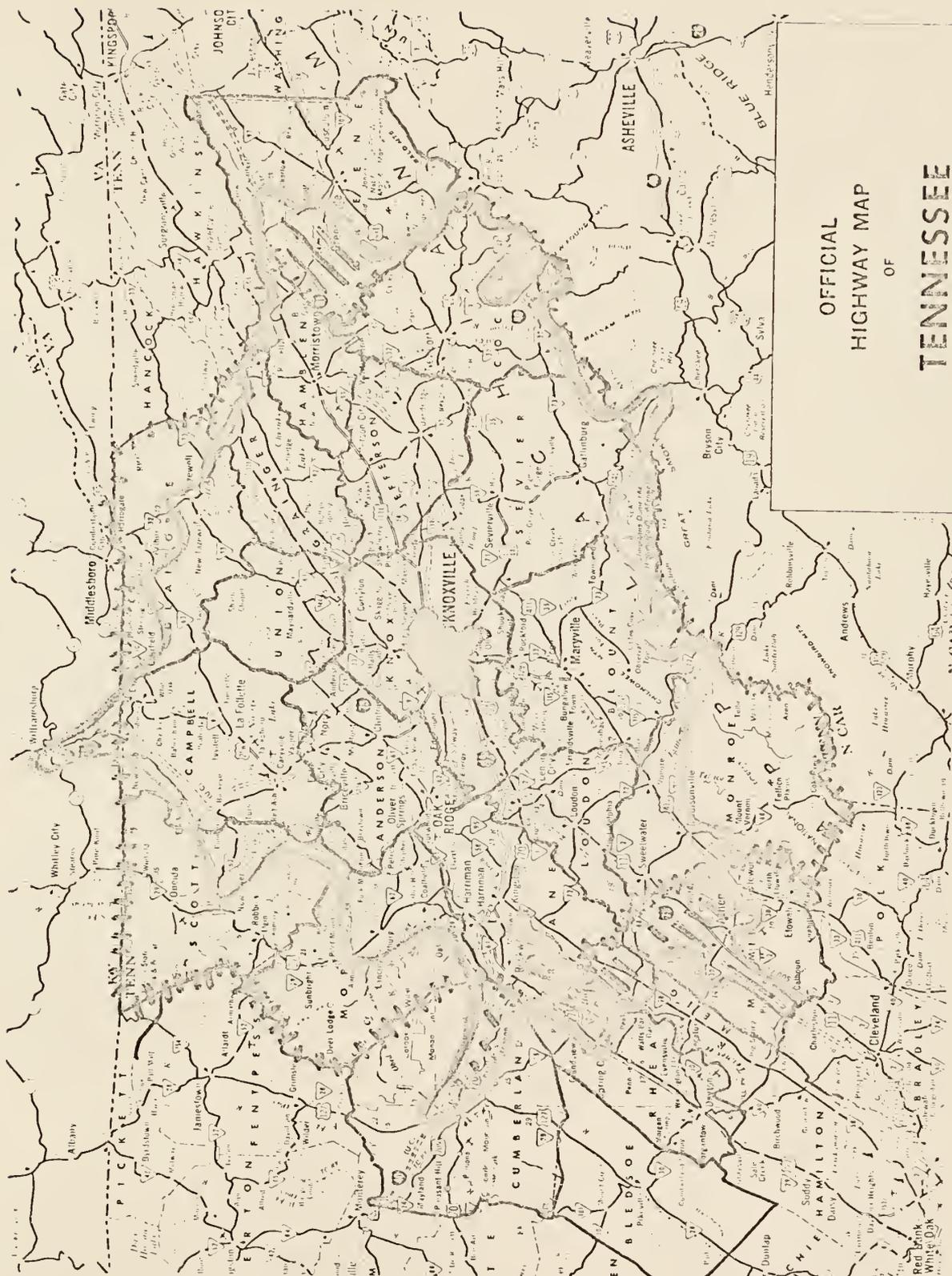
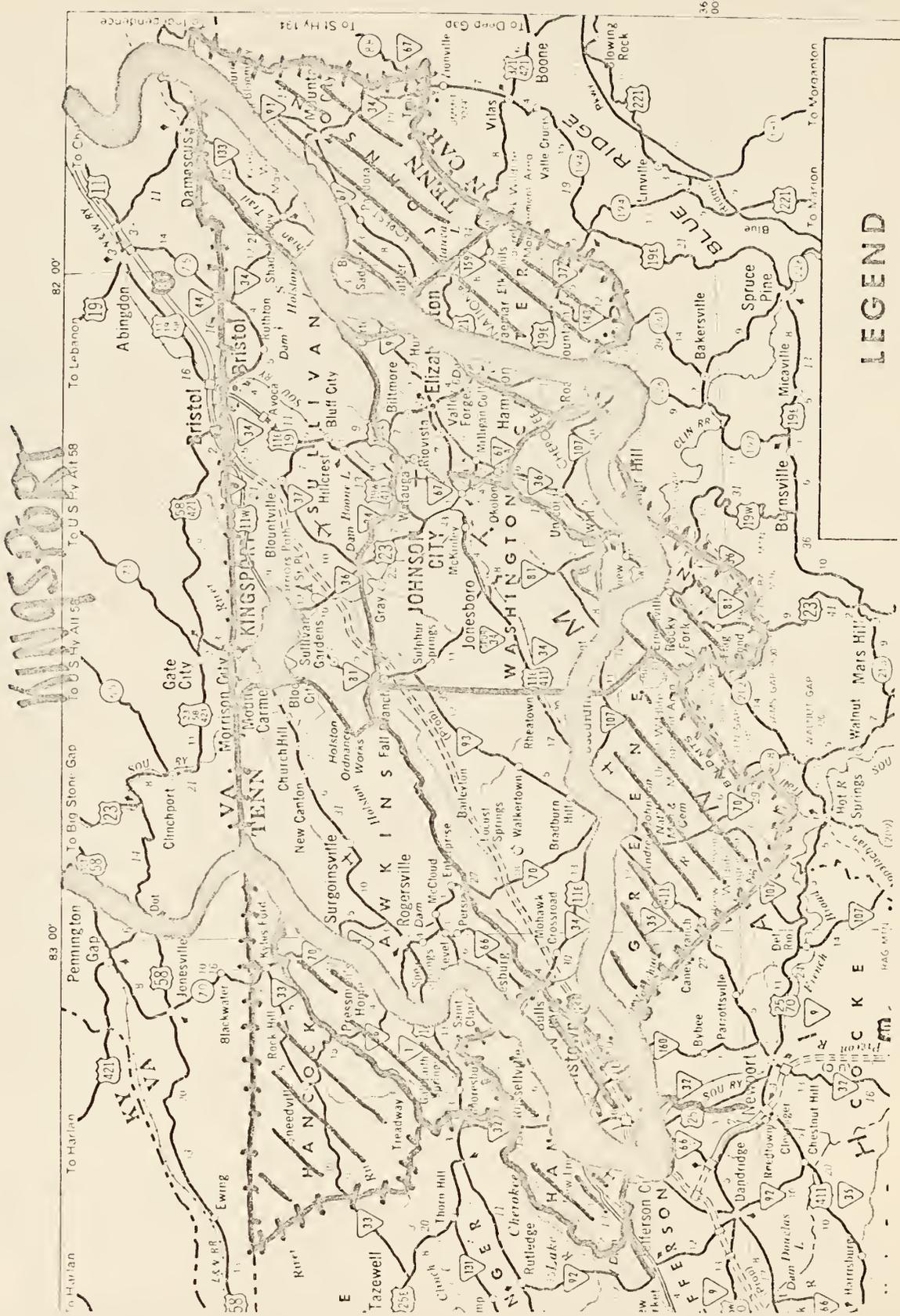


PLATE III



LEGEND

83 00' To Harrison To U.S. Hwy. Alt 58 To U.S. Hwy. Alt 88 To Lebanon To Clarksville To U.S. Hwy. 194 To Deep Gap To Marion To Morriston

36 00'

EXPLANATION OF PLATE III

The Tri-Cities Planning Region

The area inside the heavy black line is the travel time region.
The area inside the thin black line with cross bars is the original region.

EXPLANATION OF PLATE IV

The Lower Cumberland Planning Region

The area inside the heavy black line is the travel time region.

The area inside the thin black line with cross bars is the original region.

The area to the right of the line with cross bars running from the top to the bottom of the map is Appalachian Tennessee.

EXPLANATION OF PLATE V

The Upper Cumberland Planning Region

The area inside the heavy black line is the travel time region.

The area inside the thin black line with cross bars is the original region.

The area to the right of the line with cross bars running from the top to the bottom of the map is Appalachian Tennessee.

PLATE V



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STATE PLANNING OFFICES' APPROACHES TO REGIONAL PLANNING AND SUB--
STATE REGIONAL DELINEATION: THEORIES, STRATEGIES AND PRACTICES

by

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One of the most significant socio-economic trends in recent American history has been the increasing mobility and urbanization of the American population. Major contributors to this displacement of population from rural areas and its concentration around urban nodes have been the mechanization of agriculture, rapid improvements in America's transportation system and the increasing specialization of the American economy.

In urban areas, expanding central cities found themselves surrounded by small suburban governments unwilling to co-operate in attempts to solve metropolitan growth problems. In rural areas, small towns decayed and disappeared as the surrounding farmer-consumer population moved away. The problems of the metropolitan areas and of the depressed agricultural and mining areas required political and economic solutions far beyond the legal and fiscal capacities of local governmental units.

State legislatures were either unwilling or unable to aid local governments. Gradually, the local governments turned to the national government for assistance and Congress enacted a series of metropolitan and economic development programs.

These federal programs generally required local governments to join in co-operative planning for the entire region in which a particular problem existed. The result has been a numerical explosion and growth of federal-local, regional planning agencies, many of which have overlapping jurisdictions. An evident lack of planning co-operation and policy co-ordination in these planning regions, between the regions' cities, the

different federal-local agencies and the state governments, has created demands from all levels of government for a more rational system.

One solution to this problem would be the creation of a single set of uniform regional delineations for intergovernmental policy and planning purposes. It is the main contention of this thesis that the state government is in a potentially effective position to undertake the challenge of delineating uniform, intergovernmental regions. The thesis approaches this sub-state regional delineation process as a problem to be solved from the viewpoint of the state planning director. The thesis, in step-by-step detail, explores the problems which the state planner is likely to encounter in the delineation process.

In analyzing this delineation process, the thesis raises six basic questions and seeks to provide pertinent answers. First, what types of regions are available? Three theoretical region-types were found in the literature: homogeneous, nodal and administrative regions. Second, what are the major purposes of regional planning? Basically, four major purposes were discovered: co-ordination of intergovernmental programs and activities, specific functional planning, comprehensive planning-programming and technical assistance to local governments. Third, what implications do these regional planning purposes have for the structure of the region? A suitable region needs to possess an internal cohesion created by a population

experiencing a common environment with common economic and social bases. Fourth, what region-type seems best suited for multi-purpose, regional planning? The nodal region appears to be most suitable based on the current spatial structuring of the American economic system. Fifth, what are the techniques for delineating these regions geographically? Appendix III presents a suggested delineation methodology for the nodal region using the growth point concept to locate urban nodes and using the travel-time concept to delineate regional boundaries. Sixth, how does the state planner gain intergovernmental acceptance of his regions so as to implement a comprehensive, state-wide, social and economic development program? The state planner's personal ability to communicate effectively with certain community and government leaders appears to be a key factor in most implementation strategies.

