

AN EXPLORATION OF COMPONENTS AFFECTING
AND LIMITING POLICYMAKING OPTIONS
IN LOCAL WATER AGENCIES

by

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PROJECT COMPLETION REPORT

for

AN EXPLORATION OF COMPONENTS AFFECTING AND LIMITING
POLICYMAKING OPTIONS IN LOCAL WATER AGENCIES

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This is a Completion Report of Phase I, but only a partial report of the total project. All tests at this stage are of the most elementary type and preliminary to the development of more sophisticated designs, we request that they be treated as such.)

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ABSTRACT

The major question guiding this research is how do internal elements in and output from public* systems* affect, restrict, and/or facilitate water* policymaking* and administrative systems.* Randomized samples in five communities, including rural* and metropolitan* localities provided a number of major elements in public systems that restrict options of the water policymaker and administrator.

- 1) Negative perceptions* of the water policymakers;
- 2) Peer communication* networks;
- 3) Socialization agents* which structure restrictive orientations toward taxes* and funding;*
- 4) Management--constituent communication networks;
- 5) Conflicting ideological* formations;
- 6) Low levels of social and political skills among the public.

These in-system elements manifest themselves to restrict the policymaker in his options.

- 1) Persons who participate regularly in community* decisional* affairs tend to have restrictive orientations toward funding water programs;
- 2) Those who are major contributors to the management communications system are medium to high social status, political activists with negative perceptions of water officials;
- 3) Persons who support local water administrators do not have the predispositions or social skills required for effective participation;

- 4) Long range planning goals gain wide acceptance while public willingness to support budgetary and administrative measures necessary for their attainment is narrowly based;
- 5) Traditional identifications and values restrict local systems' ability to meet the needs of their urbanizing environment.

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Chapter I

SCOPE AND PURPOSE

In the words of Eugene Eaton of the Office of Water Resources Research, this research project is a "ground-breaking ceremony." For three years it has been and it still remains our fundamental obligation to specify empirically how "water publics" and selected groups and individuals in those publics restrict and/or facilitate water agency decision-making systems. Realization of such goals requires the researchers to be pioneers in a wilderness of unknowns where the tools of discovery remain crude at best. Moreover, we have had to pursue discovery in a small geographic area (described in Chapter 2) while being obligated to retrieve data and results which would be generalizable to publics and agencies on a national plane. Hence, there is real meaning in Eaton's remark.

At the time the research was initiated our objectives were outlined as follows:

1. To specify system elements and parameters influencing and restricting the effective range of options available to policymakers in local water agencies.
 - a. To specify relationships among policymaking sub-systems and
 - (1) the general public;
 - (2) relevant special publics;
 - (3) other relevant factors (e.g., the legal framework, the economic system).
 - b. To determine which of the relationships so specified are internal elements of the policymaking system and which are parameters.
 - c. To assess the varying impacts on the range of policy options and policymaking potential.

2. To compare results from a setting in which agrarian values tend to dominate with one in which agrarian values are less dominant and may be tending toward urban value dominance.
3. To provide a broader base of information for water policymakers about:
 - a. public expectations.
 - b. ranges and limits of public acquiescence and support for adaptation and innovation in water policymaking.
 - c. expressed wants and needs of water users.
4. To train water scientists in the social sciences and supplement efforts to develop programs which will stimulate interest in water science and provide opportunity for students at both the undergraduate and graduate levels to acquire skills.

We fully appreciated the need to pursue these objectives in a framework which accounts for problems generated by a rapidly developing technology and changing environmental conditions which have dramatic effects on the human condition. Irrespective of whether they are expressed in terms of engineering, economic efficiency, benefit cost, or other types of relationships, technological and administrative outcomes have decidedly serious consequences for the level and quality of human life. Administrative decisions to lock hydrants so that children will not turn them on during the periods of severe heat can be a generator of social problems in the ghetto. An innocent appearing and seemingly "rational" decision of this sort may have non-rational consequences of great

proportions. At the very time the child is denied access to cool water, city officials may have sprinklers running at taxpayers expense to keep the green belts in a condition that fulfills the values of a middle-class population. Again, placing a dam in one place rather than another concentrates populations differently, changes living patterns and life styles, affects the ways in which people communicate with each other, and changes relationships between various publics and their leaders.

The manner in which patterns of living, life styles, and human relationships combine often determine what happens to technological plans and goals; and more importantly, they play a large role in determining the type of environment we will have in the future. It is not enough that a decision be technologically sound or rational in terms of professional or social class standards. They must also fit the needs of human life. In this sense it is not sufficient that they merely account for what it takes to sustain life over the centuries; they must account for the quality of human life.

Our experience indicates that physical scientists, engineers and administrators as well as social scientists, are beginning more and more to recognize an urgent need to develop more reliable and valid explanations and explanatory theory in the realm of human affairs. Much to our chagrin, it sometimes

appears that physical scientists, engineers and administrators are more aware of the need than social scientists. They evidently have greater need for the information. In a number of meetings with engineers and physical scientists over the past two years, members of our research team have noted that the subject has never failed to arise, and on some occasions it has consumed the major portion of the participants' time. At a recent meeting of the Non-Hydrologic Aspects Task Committee of the American Society of Civil Engineers, the membership concluded the following concerning needs for research on social relationships in the area of water administration:

Hard-core resistance and strong support groups of people sometimes are not recognized by public administrators. Administrators appear to have a proclivity to "tell" rather than "sell" ideas and plans. Yet, power structures, social action programs, diffusion processes and related factors have been studied and can be reasonably well defined. Some types of public behavior or reactions can be reasonably well anticipated. There are methods for assessing receptivity to change. Research is needed on communication methodology. Individual disciplines tend to work from their own criteria and these must be balanced out in any interdisciplinary approach, for example economic efficiency verses social values.¹

Today, more and more administrators are asking such questions as how their employee, constituent, and non-constituent publics affect them and their operations. They ask how their

¹W. B. McPherson, Memorandum to the Non-Hydrologic Aspects Task Committee, American Society of Civil Engineers, Cambridge Engineering Sciences Laboratory, April 22, 1968.

behavior affects public responses to their policy and other activities. Or, they ask which public relations skills have the biggest pay-offs in getting support for policy. We believe they want to know, and we believe their questions deserve attention, and finally, we believe that as practicing social scientists we are obligated to see that the questions receive attention.

The administration of natural resources utilization involves far more than merely the administration of "things". In fact, the administration of "things" itself ends up with the administration and manipulation of human beings. We have come to realize that technological and efficiency goals cannot always be permitted to take precedence over human goals and human welfare. Somehow we must find ways and means for discovering the interrelationships and impacts between human and technological goals.

Our research also accounts for the state of social knowledge. The level of knowledge of the complex human activities invested in decision-making is quite different from the state of knowledge of the technical accomplishments which are the result of such decisional processes. Many creative engineering plans, beneficial economic proposals, or other well intentioned technical proposals have foundered due to ignorance of the social mechanisms associated with successful completion

and administration of such projects.

Certainly the policymaking processes in water afford a critically important area for discovery if we are to meet future problems adequately. This research project has comprised a beginning step in that direction. The data in this report are analyzed in a simplified manner in order to search out the limitations on local water decision-making and develop hypothesis and design for more sophisticated testing. In other words, we are engaged in a hunting expedition for the sources of a major policymaking dilemma. The state of social information at the present time does not afford opportunity to policymakers to know the alternatives open to them. Moreover, many of the known alternatives are likely to be rejected out of simple fear and uncertainty resulting from the existing voids in our social information about potential reactions flowing from various publics. Consequently, there is a high frequency of hesitancy, considerable resistance to innovation, and a tendency to act only when necessary.² Due to the low visibility of the public expectations, beliefs, and desires, a great many decisions are based on guesswork and crude assessments which policymakers eke from their contact

²These sorts of phenomena are documented in Thorfinn N. Tjersland, Organizational Adaptations of the Pebble River System, unpublished M.A. Thesis, Colorado State University, March, 1967.

with limited numbers of the public. We have used a number of the more simple social science concepts and techniques for measuring and explaining human behavior in order to analyze the social impacts affecting local water administration. Human organizations and other entities involved with water are conceptualized as water communities and action systems. Each policymaking component has within it interaction patterns and relationships that characterize the system. These patterns are influenced and limited by elements existing outside the boundaries. There are, so to speak, a large number of elements bearing on the policymaking system which constitute parameters in somewhat the same way the weather outside a building affects the heating system within the building. A parameter is defined as a state, a magnitude or a factor determined outside the particular system under observation and remaining constant or varying with definite regularity during the period of observation.

In the initial stages of research, the focus has been upon those external (exogeneous) elements in the general public that influence the policymaking and administrative systems of various agencies. This might be envisioned as analyzing the relationships between two systems. How, for example, do internal elements ~~of~~ and output from public systems affect, restrict, and/or facilitate water policymaking and administrative systems?

Here seems a proper place to provide the reader with a number of major elements in public systems which our research has isolated as highly probable restrictive influences on the options available to the policymaker and administrator.

- 1) Negative perceptions of the water policymakers or administrators among their publics;
- 2) Peer communications networks (friends and neighbors circuits);
- 3) Socialization agents³ which fix restrictive orientations toward taxes and funding;
- 4) Restrictive ideological formations (e.g., low tax ideology);
- 5) Management--constituent communications networks;
- 6) Conflicting ideological formations;
- 7) Low visibility of the urbanization process;
- 8) Low levels of social and political skills among members of the public;
- 9) Ideological or expressive orientations toward planning rather than instrumental ones.

A number of the following discoveries from an analysis of the sample relationships will provide the reader with illustrations of how the above public in-system elements manifest themselves to restrict the policymaker in his options.

- 1) Persons who participate regularly in community decisional affairs tend to have restrictive orientations

³Socialization agents are social mechanisms such as the family or peer group through which we learn and/or acquire our value and belief systems.

toward funding water programs.

- 2) Those who have negative images of water administrators transmit them freely to peers.
- 3) Negative perceptions are transmitted to water managers while positive ones are not.
- 4) Persons who support local water administrators do not have the predispositions or social skills required for effective participation.
- 5) Long range planning goals gain wide acceptance while public willingness to support budgetary and administrative measures necessary for their attainment is narrowly based.
- 6) Preferences for high quality operational practices exceed those for developing the physical and managerial capacity of the local system.
- 7) Programs for economic and social improvement of the community are supported while measures to supplement service capabilities are not.
- 8) Traditional identifications and values restrict local systems' ability to meet the needs of their urbanizing environment.

The reader should be reminded that the above generalizations, although drawn from reliable and hard data, are still suspect due to the underdeveloped state of social theory and analytical instruments which must necessarily be employed. As conclusions they should retain a status of no more than highly tenable hypotheses which require a great deal more testing.

We have kept our eyes trained on simple bivariate relationships during this first phase, knowing that results from them were woefully inadequate for sturdy scientific generalizations. We have legitimate reasons for doing this. Simple

tests provide us with knowledge about elementary linkages between variables and give us cues as to the probable direction in which the linkages flow. These cues are extremely useful for developing more sophisticated designs and hypotheses for testing, or in the words of Eugene Eaton, "for getting a handle on the confusing mass of information." As a variable demonstrates increasingly high capability to classify a wide variety of other variables, for example, we will probably find it facilitative to our learning process to shift its position in our more sophisticated designs. The data analysis presented in pursuant chapters contains many cases in point. The bivariate tests indicate the high classificatory power of communication variables. Because they do we are giving them a higher position in our test models (e.g., models for factor analyzing and models for regression analysis, one of which is presented in the concluding chapter).

Hence, the reader is asked to bear with us as we move systematically through a series of results from bivariate tests which we deem to be basic to more adequate testing in more sophisticated paradigms: Not that the simple tests tell us little or nothing. Indeed, they reveal a great deal. But total dependence upon them for social generalization can lead to extremely spurious conclusions and further frustrations in the real world. We, therefore, seek to mold our tools step by step as we move through the research.

Chapter 2

RESEARCH STRATEGY

The general objectives in Chapter 1 impose an obligation to operationalize a design that comes directly to grips with some of the most difficult questions we can raise about democracy and the way it works. We can, for example, envision total systems of varying sorts in which their respective publics as subsystems interact with another type of subsystem, the management. Just how does a public restrict or place bounds upon the behavior of its policymakers and administrators? This is a central question which must be given major consideration in drafting a design.

Breaking open such questions requires a research strategy that permits comparison of systems within an orderly framework. The proposed framework must be so designed to permit a classification of the systems according to probable determinants of disparate sets of characteristics and conditions of the system. This strategy enables the researcher to ask questions and test hypotheses concerning the determinants of relationships within the system. Specification of the determinants of such relationships is vital in meeting the major research needs in the water resources arena, especially the need for "suitable vehicles for taking into account public attitudes and desires in urban water resource development."¹

¹See Murry B. McPherson, "Background Rationale," in Metropolitan Water Resources Research Agenda Committee, Summary Report (Washington D.C.), April 17, 1968, p.X-17, Item Nos. 3,5,6.

We therefore selected four major variables which we hypothesized as determinants (classificatory variables) of system relationships. Our choices were from those variables which (1) have been shown in previous studies to possess classificatory power, (2) do not themselves fluctuate radically over time, (3) can be measured with a modest degree of rigor, (4) are not highly sensitized to radical changes produced by the intrusion of most exogeneous (out-system) variables, or for that matter, changes and shifts among in-system variables, and (5) do cause change in relationships among the in-system variables when they, the presumed determinants, shift. The variables that we hypothesized as determinants and therefore selected were:

- (1) The water service agency's public or private character;
- (2) The level of the agency public's participation in community, state and national public policy processes;
- (3) The level of administrative modernization characterized by the agency itself (e.g., level of specialization, skill, formalized recruiting and decision-making);
- (4) The urban-rural character (level of urbanization) of the agency's physical domain and service area.

Selecting the Communities

A water community has been envisioned and operationalized as an agency, the publics served by that agency, and the geographic and jurisdictional domain in which the publics reside. This means that a water agency can be (and often is) a part of several other communities; or it may be composed of one or several other communities.

Figure I contains a schema for ordering agency systems according to the four criteria selected. For the convenience of the reader the five communities containing agencies and their publics which are examined in this study have been entered and circled. The schema itself provides an extremely rigorous classification from which communities can be selected for controlled comparison and testing.

The area specified for classifying and sampling agencies and their publics (water communities) was a metropolitan and rural complex bounded by Denver on the south, the Eastern Slope of the Rocky Mountains on the west, the Wyoming and Nebraska boundaries on the north, and a line running north and south from the Nebraska border through Brush, Colorado, to a line running straight east from the southern limits of the city of Denver.

Pilot samples of several water communities in this area indicated that selections of agencies and publics for examination would have to involve one further set of criteria. To insure the retrieval of viable data for comparison and testing, the communities selected needed to be ones in which water policy and problems were salient to the public. We were therefore obligated to direct our strategy toward selection of a community in each of the respective categories that demonstrated the existence of high salience of water for the community public. This explains why our initial selection of a community from each of the categories did not follow procedures of randomized selection as closely as we would have preferred.

Figure 1
SCHEMA FOR CLASSIFICATION OF COMMUNITIES

RURAL								URBAN							
MODERNIZED				UNDERDEVELOPED				MODERNIZED				UNDERDEVELOPED			
Public		Private		Public		Private		Public		Private		Public		Private	
Hi Part.	Lo Part.	Hi Part.	Lo Part.	Hi Part.	Lo Part.	Hi Part.	Lo Part.	Hi Part.	Lo Part.	Hi Part.	Lo Part.	Hi Part.	Lo Part.	Hi Part.	Lo Part.
E	N	O	F	J	(C)	L	P	Q	(A)	I		(B)	W	G	(D)
B	U			K	V		Y	R				(E)	H		M
C	A				Z			S							X
D								T							
								E							

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The reader will also note that our initial choices of categories for analysis gave greater play to urban systems than the rural. We did this because the urban areas possessed far more pressing problems at the moment.

Operational Strategy

Once the communities had been selected, designs and strategy for examining them were formulated and structured. The objectives outlined in Chapter 1 above obligated us to begin our endeavors with probes of the agency publics. The retrieval of hard data from a large public necessitates, first of all, sound sampling procedures. Samples must be representative and sufficiently sizeable to enable us to test a wide variety of relationships. Extremely small samples, even when they are representative, produce too many zero cells in data categories and thus limit the researcher's capacity of measurement. We have therefore endeavored successfully to retrieve data from samples which included one hundred (100) or more respondents. Each community's universe was verified and all households numbered. Selection of households was completed according to the best accepted means of randomization. The following description of the procedures for one community (Happy Valley in this instance) describes the procedures used in all communities.

Since individual population elements could not be identified, areal sampling was employed as a means of obtaining a representative sample. Maps of the geographical domain of Happy Valley

were obtained which showed the township number, range number and section number of the area encompassed within Happy Valley. Three days were spent identifying and numbering systematically the occupied dwelling units and their specific location within the district. A total of 732 occupied dwelling units were identified and numbered. After each dwelling unit had been assigned a number of 1 to 732, a random number table was employed to select sample units. A few alternative numbers (fourteen or 10% of the total of 140 sample units) were also selected. . . .⁽²⁾

Theoretical Focus

To those who inquire about our decision to probe the public before we probed agency officials we give the following answer. Our primary objective requires us to examine the interaction between publics and their policymakers and administrators. This means that we must examine public behavior very closely, and especially in terms of the public's behavioral responses to their policymakers and administrators. First, however, it should be noted that publics as a whole or members of particular publics do not respond to their administrators and policymakers uniformly. But even though variations abound among possibly no more than a few uniformities, we can locate uniformities in the variations. Specification of the patterns in variation and specification of the relationships among such regularities comprise an important step in the development of our powers and capabilities to explain and predict.

²Brian Rader, Happy Valley: The Politics of Rural-Domestic Water Agencies, Unpublished M.A. Thesis, Colorado State University, August, 1966, pp. 29-30.

If regularities generally and regularities in variation are to be specified and examined for relationships among them, then we must be realistic about the response patterns that comprise the data with which we work. A close reading of prior research and theoretical literature in the social sciences indicates that persons respond to situations, symbols, and objects in terms of the way they, themselves, see such phenomena. For example, if we can establish firmly that a little boy believes that his bedroom is full of goblins, then we can predict his behavior toward the room or in the room much more accurately than any predictions based upon what his mother may tell him or what can scientifically be established about the existence of goblins in the bedroom. The same is true of all of us. We respond in terms of what we see. If a constituent perceives his policymaker to be an ogre, he will respond to him as if he were an ogre. Or, if a citizen harbors an erroneous perception (and there are many of these cases) of what his administrator does, he will act out roles and respond to the administrator in terms of that erroneous set of perceptions.

Hence, if we are to plot interactions realistically and meaningfully, we must conceptualize the response (output) as a function of the perceptions held by the individual or group. Actually a person interacts with the administrator he perceives, not necessarily the legally defined official or his legal role. Nor is it likely that he interacts with the administrator's self-perception. An administrator's view of

himself, his duties, and his roles are among the many elements and features that may determine a constituent's perceptions of a community system. But they are not the objects with which the constituent tends to interact directly. He is more apt to interact with the system that he sees. Likewise, the legal definitions of structures, roles and obligations affect and mold constituent perceptions of the system, but are not necessarily something with which he interacts directly. So, for the purposes of systematic measurement we begin with perceptions and behavior of individual and group components of the public system. It is this action that can be most reasonably hypothesized as likely to affect directly the options of administrators and policymakers.

Now, if we view a system as an engineer does, that is, as a black box with something going in at one end and something else coming out at the other end, then the restrictive behavior can be perceived as part of a public system's behavioral output. This output from the public's system is input into the managerial, policymaking and administrative system. Figure 2 provides a graphic representation of our hypotheses concerning relationships within and between the two types of systems. As such it aids us in our efforts to break open the types of questions we have faced in this research. Column III lists a large number of interacting components which we seek to analyze as possible determinants of features and relationships found in the administrative system (columns IV and V). We are hypothesizing, then, that events in the

administrative system are partly a function of and dependent upon factors and relationships in public systems. If the reader will treat both pages of the model as if they were laid end to end, he will see that dependency among variables is hypothesized as flowing from right to left (from V to I) back through the model. That is, variables under V are hypothesized as dependent upon variables under IV or as functions of them; and those under IV are hypothesized as functions of variables under III and so on. Outcomes and consequences flowing from IV and V are fed back in some proportion, of course, into the public system. But attempts to focus directly on this process must be left to a later time since we are required to concentrate on the flow from I to V with special emphasis upon the area (or void) between III and IV.

Actually, the design constitutes an analogue systems model. People are action units. A primary set of parameters (as defined in Chapter I) to the policymaking and administrative system includes particular public attitudes, beliefs, preferences, expectations and related factors that impinge on the decision-maker and limit his policy options. We have constructed the model to aid us in locating some of these potential impediments to water decision-making. A major advantage of this type of representation is the visibility of unanticipated sources of decision-making support and of ranges of flexibility, as well as impediments. The purpose of the model, in other words, is to order our analytic priorities and structure the presentation of data.

Figure 2

A MODEL FOR LOCATING IMPEDIMENTS TO WATER DECISION-MAKING

I. Structural Characteristics	II. Respondent	III. Orientations, Social-Psychological Respondent
Communities	Socio-Economic Traits	Political Salience
<ul style="list-style-type: none"> -Happy Valley <ul style="list-style-type: none"> Public Water District Unorganized Community Rural-Suburban Working-Middle Class -Stone's Throw <ul style="list-style-type: none"> Public Municipal Water Utility Organized Community Suburban Working Class -Rambler <ul style="list-style-type: none"> Public Municipal Water Utility Unorganized Community Suburban Working-Middle Class -Aspiration <ul style="list-style-type: none"> Public Municipal Water Utility Unorganized Community Suburban Middle Class -Euphoria <ul style="list-style-type: none"> Private Mutual Water Company Unorganized Community Suburban Middle-Upper Middle Class 	<ul style="list-style-type: none"> -Length of Residence -Age -Community of Origin -Education -Occupation -Employed -Father's Occupation -Income -Parential Party Identification 	<ul style="list-style-type: none"> Political Identifications <ul style="list-style-type: none"> -Party -Community Political Perceptions <ul style="list-style-type: none"> -Sanctions, positive & negative -Responsiveness of officials -Attitudes toward politics Orientations toward Public Officials <ul style="list-style-type: none"> -Supportive <ul style="list-style-type: none"> Water Local State and National -Neutral <ul style="list-style-type: none"> Water Local State and National -Restrictive <ul style="list-style-type: none"> Water Local State and National Value Structure and Attitudinal Orientations <ul style="list-style-type: none"> -Sociability -Urbanism -Attitude toward change -Expressive-Instrumental -Personal Cynicism -Efficacy Measure

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A MODEL FOR LOCATING IMPEDIMENTS TO WATER DECISION-MAKING - Cont.

IV. Behavior Inputs to Administrative System

V. Administrative System

Political Interaction

Voting

- Local elections
- Water elections
- General elections

Political Discussion

- Family
- Peers
- Officials

Community Political Participation

- Scope
- Type

General Political Participation

- Scope
- Type

Water and Communications

Water Complaints

- Primary groups
- Officials and leaders

Water Discussion

- Primary groups
- Officials and leaders

Water Decision-Making

- Peer activities
- Community activities
- Government activities

Administrative Development

- Universalistic norms
- Functional specialization

Scope of Decision-Making

- Narrow
- Wide

Orientation Toward the Public

- Supportive
- Restrictive

Internal Response to Clientele Input

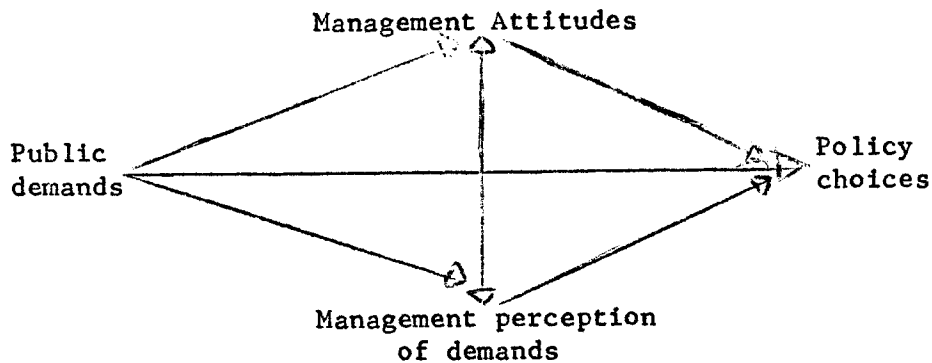
- Structural changes
- Procedural changes

Actual tests for contingencies or relationships among and between variables are a distinct concern for both researcher and reader because a great deal rides on test outcomes. In this initial report we use a Chi-Square test in many instances to indicate contingency or lack of it. The Chi-Square test is a severely rigorous one and its use on social data is open to several questions of great theoretical magnitude. Although it is a good statistical tool for indicating the strength of a relationship between two variables, the test itself does not indicate whether the variables are related due to elements indigenous to them or because one or more other variables (unknowns) have intruded and made them appear to be related when they are not. A second problem with Chi-Square stems from its severity as a test. When applied to the gross data of social science it may show a weak relationship or none at all when, in fact, a strong relationship could exist. Because these two problems often give the reader a distorted perception of the relationships, we have not included Chi-Square test results in the presentation of our tables. The test was used only as a guide for the analyst, nothing more.

An even more serious difficulty, however, arises from the failure of Chi-Square tests, or any others for that matter, to tell social scientists the direction in which relationships flow. If we find a close linkage between public attitudes and agency practices, for instance, we have little or no way of telling how each affects the other. To illustrate even more

clearly, consider Figure 3:

Figure 3
Casual Scheme



The observer will note immediately that his ability to track a causal chain through the system may be severely impaired. Chi-Square coefficients are not likely to tell you very much about such chains. But neither will regression coefficients unless we are able to assume the residuals in our equations are equal to zero; and very frequently we cannot do this. Hence, we cannot tell whether the causal track runs from demands to perceptions to attitudes and then to choices or if it follows another course. In statistical terms we are under-identified in our equations and are therefore hampered in our efforts to track cause and effect. We do not believe, however, that we should despair of tackling such problems. We do contend strongly that the reader needs to be apprized of the difficulties and readied to account for deficiencies in generalizations drawn from analysis where such problems exist. The problems themselves impose the obligation on us as social researchers to see what we may be able

to do about them. This we contend to be a major justification for undertaking the research in the first place. Our generalizations, then, are clearly preliminary and tentative at this stage. We ask the reader to accept them as such. At best they stand as tentative hypotheses for future testing by us and other social researchers. As we stated earlier in Chapter 1, we are molding our theoretical and other tools as we forge ahead. The present plight of social theory demonstrates that our strong desire to secure answers before we have the tools to obtain them merely compounds an already overburdened and messy situation in social theory.

During the time we have been on the project we have become increasingly more aware of the high importance of communication and ideological variables. As a result, if we were to begin this project anew we would develop more tools to measure such phenomena as "low tax" and "balanced budget" ideological dimensions than we have developed and employed up to this point. And although we have surveyed the nets and realms of communications in our past and present endeavors, we would search even more deeply for relevant and significant communication elements. We now know that complaints comprise a little examined, but highly important medium of effective communication. We also know that unspoken or silent complaints appear to be crucially significant at many points. Put briefly, we use or present data to instruct us about future theory and data needs.

The direction of our efforts should be clear to the reader by now. We are attempting to develop a model that will increase our predictive and explanatory power. The most highly developed tool now available for such a model is mathematical reasoning. Use can be made of simultaneous equations which are stated in a manner that allows for the intervention of asymmetrical relationships. When stated properly, allowing for assumed error, predictions can be made about the magnitudes of correlations and regression coefficients. These predictions can be tested against our data. If they stand up we will retain the model; if they do not we must reject or alter it.

Testing a model inevitably involves deviations from the ideal represented in the model. That is to say that there will always be some error to measure. The greater the departure from the ideal, the larger the number of variables that must be brought into the system. The larger the number of variables in the system, the simpler our assumptions must be about the way they are ordered and related in the system. The costs to the analyst of including a large number of variables in his system, therefore, run very high. One of the greatest costs to bear is not only the necessity to keep assumptions and designs simple, but to build designs incrementally. The latter cost is very great since it deprives the researcher of an opportunity to develop general

theories. Without general theories, social science continues to suffer from underdevelopment.

Given this state of affairs, we as social theorists and analysts have no alternative but to build our theories and designs incrementally and keep our assumptions, designs, and tests simple at this juncture. Again we ask the reader to be patient in a long process of incremental theoretical development and to be critical as he thinks with us.

CHAPTER III

FIVE COMMUNITY SYSTEMS AND THREE WATER AGENCIES

Comparisons of two or more communities should include a description of their general environment, their socio-economic and political character, as well as their social and economic structures. This is especially important when the communities are housed in one region of the country and the analyst seeks to use comparative results as a basis for generalizing to communities in other regions.

Happy Valley

In most ways Happy Valley is not a community in the strictest sense of the word. It is the domain of a rural-domestic water agency encompassing forty square miles of a rapidly urbanizing rural environment. Hence, about the only unifying feature for citizens of the water domain is a potable water service for households and livestock. The base for generating interests and personal community identifications of a jurisdictional nature is thus very narrow and not conducive to the creation of community spirit.

Moreover, Happy Valley is a relatively new phenomenon, being organized legally as a special district in 1962 in response to growing community concern over the need for a large and plentiful supply of potable water. As a result

many persons living in the district are only slightly aware of its existence, another factor that reduces the sense of community. Finally, agency officials have not exerted much effort to make the agency and its jurisdiction more visible to the public.

This does not mean, however, that no community exists within the confines of the district boundaries. All too often we tend to overlook the extent to which conflicts over such things as water services within an area function to congeal interests and demands, stimulate identifications and generate a sense of community. Conflicts over problems described later in this chapter appear to have generated interests and led people to identify with each other and with particular interests that are community-wide.

The district is organized under public law and functions by virtue of state legislative authorization. Organizational activities began in the late 1950's among farmers who were showing increasingly greater concern about the steady deterioration of the quality of well water. By 1960 organizational activity took place in earnest and steps were taken in 1960-61 to create a special public district which became operational in 1962. The district encompasses both suburban residences and mobile homes, as well as long established farmsteads. Owing to the provisions in the law that permit

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exclusion, many parcels of land within the district boundaries have been excluded from the district as a result of petition by their owners. Thus the land area of the district has a checkered or patched appearance. The outer boundaries are very irregular and follow no specific plan or pattern.

At the time our sample was drawn, the district contained 732 separate dwelling units (including trailer houses). Although farmers were in a minority (about 14% of the total population), they consumed a major portion of the water since a great deal of it is used to water livestock.

Agency boundaries abut those of a rapidly growing municipality of some 30,000 population and the district has therefore been a recipient of a lot of the urban growth pouring out of the municipality. Nevertheless, farmers have continued to play prominent roles in the policymaking processes and we could therefore expect rural values to be salient and strong in policymaking.

We anticipate this dominance of rural values despite the large number of managerial and professional socio-economic types in the Happy Valley community (36%). A significant factor here is the high incidence of people who have lived in the community for no longer than three years or less (45%). They are obviously not so deeply rooted in the community and its traditions as yet. Some 24% of the

population has lived in or near the community from 15 years to a lifetime and 40% of the farmers have been around 15 years or longer.

Happy Valley is a predominantly middle-class community. More than 50% of the community ranges in the middle income categories. Nearly 45% have attained a high school or trade school degree and another 36% have some college or a degree. But only about 50% of the college educated hold a degree (17% of the total sample).

The water supply is drawn from a reservoir provided under a Bureau of Reclamation project built during the New Deal Era. The district has purchased rights to a sufficient number of project units of water to enable them to provide an adequate supply for their subscribers and to retain a sufficient reserve to meet increasing demands. One project unit constitutes 1/310,000 of the Reclamation project's annual supply of about .76 acre feet per unit.

The district is governed by an elected five-member board which is vested with the usual powers to manage district affairs, tax properties, set water rates, and oversee the delivery system. A board appointed manager supervises the operations of the office staff and maintenance crew. The direct, face-to-face interaction of water users with the district generally takes place through the manager and his

staff. District elections are not too attractive to the average Happy Valley citizen. Low participation has deterred administrative development. But more importantly, low participation has also functioned to affect policy outcomes.

Most policy questions and conflicts have centered around the district's economy. Providing adequate water services to a sparsely populated environment of more than forty square miles entails costly constructions of pipelines to carry domestic water to scattered farm homes, an increasing number of suburban developments and mobile homes. To meet these needs the district issued general obligation bonds equivalent to 57% of the district's assessed property valuation. In meeting its financial obligations the management has relied on water rates, rather than taxation. Consequently, rates have been steep by comparison with municipal water rates in the same vicinity. And needless to say, the rate structure has become the source of a modestly high level of reaction and concern among consumers.

But it has been the heavy initial outlays for construction that appear to be a greater source of controversy. Construction costs led the policymakers to use small pipe, especially in sparsely populated areas, to keep expenditures down. As the population grew and more subscribers were added

to the lines, the smaller pipes became inadequate in many places for the load required, especially at peak hours. The resulting low pressure along the lines soon became a source of severe complaint. The upshot has been further monetary outlays and added indebtedness to construct pumping facilities for increasing pressure, the abandonment of some original facilities, and putting in enlarged facilities in at least one instance to supply a large housing development. This one addition to the debt increased the burden by \$500,000.

Another complication has arisen from the method selected for debt retirement. At the time that the original facilities were implaced, the district functioned on the theory that capacity to retire indebtedness would increase as the number of subscribers and taps increased. As a consequence, the bond agreements provided for payment of principle on a scale that was graduated upward with very large (balloon) payments at the end of the thirty-year term. In fact, the district was free from all but interest payments for the first few years. This too has been the source of some public concern since increasing the number of subscribers will inevitably mean (and already has meant) more outlays to increase the capacity of the system.

Finally, it should be noted that the water district's policymakers have attempted to extricate the district from

its financial troubles by passing on the high costs of the system to the urban users. Water rates are geared to a graduated fee scale. At one end on the fee scale, the rural clientele who use large volumes of water for livestock are charged only \$0.39 per 100,000 gallons while the urbanites at the other end, are charged \$2.00 per 3,000 gallons. Rural dwellers have felt that the cost of water was fair and equitable, but the urbanites on the other hand, have been inclined to think the rates are excessive for the comparatively small quantities of water they use.

The above policies have precipitated conservation issues. Having a heavy indebtedness and problems connected with debt servicing, the agency has been anxious in the past to sell as much piped water as possible. One water official has called several of the special water districts in the area "gigantic sprinkler systems" that encourage heavy use and even waste in order to obtain revenue. Such accusations are serious and they are not always made on the soundest and most reliable information. But they are made and there are grounds for making them. The pressure to sell piped water is high. One rural-domestic agency which is adjacent to Happy Valley ran extensive experiments with milk cows to demonstrate that filtered water produced a better quality milk.

It should be obvious at this point that economic conditions, pressures, and problems within the district have functioned

to make district policies and affairs both publicly visible and salient.

Euphoria

The Euphoria community contrasts sharply with Happy Valley. It is a prosperous, middle-class community of nearly 100,000 population that has no organized municipal government other than the traditional facilities provided by the county's government. The community's political system is definitely underdeveloped.

Residents of Euphoria are predominantly members of the middle and upper middle class. A large number are well educated professionals who live in well established prosperous suburban surroundings. The community contains many homes which are sumptuous and by some standards, quite extravagant. Euphoria is "opulent America." Residents are deeply involved in upper middle-class social activities and community affairs. Many are so heavily involved that they are seldom, if ever, home in the evenings.

Euphoria is situated along the Eastern Slope and is a part of a large Standard Metropolitan Statistical Area. Its boundaries abut those of the major city in the metropolitan complex which is the source of its water supply. The city sells water to a mutually owned company and the company provides the services to Euphoria subscribers. This arrangement gives the major city's water board control over most of

Euphoria's water, as well as most of the other water supplies in the county of which Euphoria is a part since several jurisdictions obtain their water from the major city. Residents of Euphoria and other suburbanites in the metropolitan area pay higher water rates than do the major city's users. In fact, the bigger share of the tab for the major city's vast water projects is paid for by suburban communities adjacent to it. Needless to say, this has been a source of many complaints.

Euphoria's mutually owned private water company is under the control of a five-member board of directors. The directors are elected for six-year terms at an annual stockholders meeting in May. Terms are staggered with one or two directors being elected every other year. Since World War II, the company has had a board turnover of four members only. Two new directors were added to an original three man board in 1955 and two replacements of old board members have occurred since, one in 1964 and one in early 1968. Turnover has been low because the directors have been able to control a sufficient number of proxy votes at each election to insure reelection on incumbants.

Control of policy and administration by a board whose directors are practically impossible to dislodge due to the control of proxy votes became a crucial source of conflict during the early 1960's. The number of dissidents among stockholders grew each year. However, dissidents never approximated a majority. This condition, which is not uncommon among

agencies of this type, presents a problem of considerable magnitude in water policy-making across the country. Community controversy can be severe and disrupting, yet the democratic mechanisms (i.e., election systems and majority rule) for tempering and allaying conflict may fail. Democratic mechanisms are frequently neither as effective nor as efficient as our ideology would lead us to believe. All this says is that electoral devices cannot always fulfill the idealistic goals that we tend to project for them. Where the scope of decisions are limited as in water matters and where the issues are few, even if sometimes volatile, majorities may be far too difficult to mobilize to obtain necessary changes for achievement of a stability, order, and productive system maintenance.

Euphoria's problem is a case in point. Between 1964 and 1968, the lucrative connections of all five company directors with land developments became an issue of swollen proportions. The smoldering issues became hot ones as the public became more aware of the use of company employees to collect proxies for the board on a door-to-door basis at company (consumer) expense. As a result company public relations were not only strained, they were full of rancor, distrust, and vituperation. In February of 1968, for example, the members of the board were accused of conflicts of interest and illegal use of company funds. A group of ten stockholders led by an attorney sought a court order compelling the directors to repay

\$250,000 to the company. The Permanent Water Committee (a group organized by the dissident attorney) held public meetings in the local high schools early in 1968. During these meetings, which were well attended, complaints were discussed and demands were made for competitive bidding on contracts, elimination of directors' salaries, prohibition of direct personal dealings with the company by directors, and conversion of the company into a public water district.

The outcome of these public actions was the creation of another interest group of influential stockholders called the "Concerned Water Stockholders Committee." This group was composed of a number of community leaders who were in a position to impose both economic and community sanctions on the company directors. This group was, of course, less volatile and more conciliatory than the Permanent Water Committee. Yet, despite its somewhat more conciliatory attitude, the committee did demand that at least two seated directors not run for office. It further demanded that directors should not be compensated more than \$100 per month (previously it was \$300 per month) and they requested that procedures be adopted to establish an impartial means of selecting nominees for office. These demands were met and implemented by the board. Another outcome was the hiring of a private firm to conduct a financial study of Euphoria's mutual water company. The study included tap fees, gallonage costs, standby charge and builder's rebates for extension of lines. This led to a recommendation for a rate increase of 6 to 7 per cent, sale of \$1.25 million in

bonds for improvements, acquisition of additional water rights, and the purchase of a small utilities company in the area.

Briefly then, a typically middle-class chain of events characterized the community response to conflict. As the potential for instability grew and as the conflict loomed more ominous and threatening, community leaders entered the picture to accomplish a feat that the electoral system and other political mechanisms could not accomplish. Their behavior was quite in keeping with the traditions of middle-class politics. Having decided to be involved directly and personally, they placed their prestige on the line, formulated and issued demands through a temporary organ (the ad hoc committee system), and stood willing to impose quietly those sanctions community leaders possess but seldom have to use--sanctions they can wield by virtue of their status, economic resources, and business alliances and allegiances. It goes without saying that more than ten years of controversy made water a salient issue area in Euphoria.

Stone's Throw

Stone's Throw is a bedroom city in the same metropolitan complex as Euphoria. It is more correctly called a "mushroom" city in that the entire city of nearly 14,000 people came into being within a span of five to ten years starting in the middle 1950's. In another sense it is a gigantic sub-division or suburban development of 2700 tract houses with a business

district barely deserving to be called that. The business district is little more than a shopping center with tattered fringes--a retail complex that competes only modestly well with a host of other shopping centers lying near its own city limits.

Governmentally, Stone's Throw has a well developed administration which functions under the city manager form of government. The city's economy, however, is weak. Tax resources are limited. Few homes exceed \$20,000 in market value and until recently the real estate market was severely depressed. The population contains a heavy loading of blue collar and working types. There is also a disproportionately large number of working wives and widowed or divorces women with children. Education levels are consequently low, and most critically, professional people can seldom be persuaded to settle in Stone's Throw. More critically, those who do settle there tend to move away. At the time our sample was interviewed, the city manager complained that there was but one engineer and one dentist living in the community. In fact, by our count, 17% of the houses were then unoccupied, and only 24% of those occupied had residents who could be classified within or somewhere near to professional and managerial socio-economic categories.

Not only are social status and income levels low, but the population generally tends to be highly mobile, transient and politically inactive. Community identifications and community

spirit are not strong. Nor is there much impetus for community development and improvement. As one city official put it to this writer: "The lawns show it." Most important, however, is the community's lack of well-stocked stable of potential leaders.

In contrast with Euphoria, Stone's Throw owns and operates its water supply, a function it took over from a private company a number of years ago. The city's council is the ultimate decision-maker on matters of water policy. The council is advised by a water board and the city manager oversees administration, operations, and maintenance.

What makes water a salient commodity and issue in Stone's Throw? It is simply that the Stone's Throw water system serves some 10,000 households of which about three-fourths of the system's users are outside the city limits and deprived of a voice in water policy and administration. Stone's Throw argues that complaints are without substance because the city stands willing (in fact, has gone to court) to annex the areas it services. These areas, Rambler and Aspiration, have resisted annexation. The content and nature of the controversy is covered more fully in the considerations of Rambler and Aspiration below.

Aspiration

Aspiration is a bedroom suburb abutting Stone's Throw. , It, too, is a mushroom city with no more than a shopping center for a business district. At the time that we sampled the community,

Aspiration covered between four and five square miles and contained about 4,800 households. Most of its residents are in the "newcomer" category because a major portion of the area's development took place in the present decade. Residents are better educated than those in Stone's Throw and they tend to come from the white collar, middle-class strata of society.

The community is young (57% of the respondents were under the age 35), politically active, and socially somewhat volatile. Civic groups emerge and organize at the slightest stimulation or provocation. Interest generally runs high and civic meetings and other affairs are heavily attended. In contrast with Stone's Throw, the community seems to have a large reservoir of people with leadership aspirations and potential.

Earlier in the decade, Aspiration moved to incorporate separately. This move was countered in the court by Stone's Throw which filed a petition to annex; but Aspiration won separate status after a long court fight. The area was, however, unincorporated when we sampled it.

The community has been totally dependent upon Stone's Throw for its water and it has endured this dependency without a voice in policy or administration. Major complaints have centered on poor service and low pressure. These issues were compounded by an attempt on the part of Stone's Throw to impose a "hydrant fee" of \$0.50 per month levied on each subscriber. Although the Stone's Throw City Council levied it uniformly on

their own constituents as well as alien users, the alien consumers were aware of the fact that they outnumbered the Stone's Throw constituents by three to one. Moreover, they were not receiving, so they thought, good water services, and of course, they were without the other municipal services which Stone's Throw provided its constituents. These issues were ones in which large numbers of the Aspiration residents became hotly engaged.

Rambler

Rambler is a less spirited community than Aspiration and is composed of a mixture of white and blue collar laboring classes who seem more content to remain an unincorporated set of bedroom subdivisions. It, too, covers about four square miles, containing some 2,800 households, but it has grown far more slowly than Aspiration and has lower quality housing. The community is somewhat older and a larger proportion of its population has been in the area longer than Aspiration's people. Also, by comparison with Aspiration, the community possesses far fewer persons with leadership potential.

Rambler, too, is dependent upon Stone's Throw for its water, and as such is without any voice in water policy-making and administration. Consequently, many of the same water issues that infect Aspiration also infect Rambler. However, Rambler's response has been more subdued and less spirited. There is less sound and fury but this does not mean that a sizable number of Rambler residents fail to be incensed and upset.

CHAPTER IV

CROSS-COMMUNITY COMPARISONS

The first step in specifying the constraints on local water decision-making is to show the nature of our data base. Five communities have been identified within the three local administrative jurisdictions. The way water managers perform their functions is structured to a considerable extent by the perceptions, attitudes, and behavior of their clientèle as that clientele communicates with the management. Our focus is on the social context in which the water administrators carry on their activities. The impact of the latter on their public will be investigated, but our present emphasis is on the five samples comprising the data base. By means of this comparison, a systematic portrait can be drawn as an antecedent to the analysis of processes resulting in constraints on local water decision-making.

The comparative community analysis has three phases. Direct inputs into the local water administrative system are presented in terms of participation and perceptions of water activities. Secondly, the community context is shown via the socio-economic traits of the water users. Thirdly, an attempt is made to contrast water processes to other decisions by using the patterns of participation in general community decisions.

The Water Users and the Water System

Respondents were asked a series of questions dealing with perceptions and activities in regard to local water affairs.

Interview probes ranged from declarations of interest in local water matters to participation in decisional activities to perceived responses of officials to the citizen's activities.

The reader should bear in mind that the topics central to local water administration are not likely to arouse widespread interest among the residents of the community. In addition to the specifications of the model, all five communities were selected as research sites because the investigators had determined that water was a salient issue to the residents. Hence, they are useful laboratories for the analysis of decisional processes.

The first step toward the assessment of potential participation in any decisional process is the determination of interest in that activity. Table 4-I contains the patterns of responses to a question regarding the amount of interest in water matters. All five communities are characterized by a high level of declared interest in water. The established, prosperous, middle class suburb, Euphoria, has the lowest level of interest with 48% reporting themselves as somewhat or very interested. The other four areas range from 79% to 89% in the same two categories.

Given this high interest, a next step would be to determine whether they have positive or negative predispositions toward the management. In three areas, adequate or good management is perceived by almost four-fifths of the respondents. In the two communities where approval is lower, water users do not have official access to the decision-making processes. Water is furnished to them by the Stone's Throw water administration which is not accountable to residents of Rambler or Aspiration.

TABLE 4-1

How Interested Are You in Local Water Matters?
(In Percentages)

TABLE 4-2

How Well Would You Say the Local Water
Supply Is Managed?
(In Percentages)

	Very Inter- ested	Some- what inter- ested	Not Very	Not At All	Totals	Very Well	Ade- quately	Poorly	Very Poorly	Totals
Happy Valley	57	32	7	4	100(131)	16	62	16	6	100(108)
Stone's Throw	37	44	14	5	100(111)	20	59	15	5	99(111)
Rambler	41	38	16	5	100(115)	5	43	32	19	99(113)
Aspiration	49	40	9	3	101(197)	2	32	39	27	100(193)
Euphoria	15	33	26	26	100(377)	20	59	14	7	100(307)

In other communities, users have the potential choice in the selection of policymakers. Whether they use it or not is another aspect to be investigated.

As a further step in showing the state of approval of their water system, four sets of respondents were asked to compare their water service to other communities¹ (Table 4-3). The two low approval communities are more likely to claim their service is poorer than other communities. A plurality of people in all communities think their services are about the same as surrounding communities. Predispositions to approve the local water management are consistent at all research sites.

Performance of social functions and participation in those activities constitute quite different analytic dimensions. When participation in water communities is investigated, the two low approval communities are those with the greatest proportion who report that they take part in community issues involving water matters. The level of participation in all five research sites is low but it is relatively higher in the two low approval communities.

Participation is further probed by asking respondents if they felt they would be welcome at a local meeting to discuss water matters. The combination of the high participation-low approval in the two non-integrated communities is reflected in their negative estimates of their reception at the city council meetings. Both Rambler and Aspiration residents are distinct in their reservations about being welcome at local meetings to discuss water matters. Stone's Throw residents have the least doubts about their reception. Over two-thirds see themselves

¹The question was developed as a result of our experiences in the collection of the Happy Valley sample.

TABLE 4-3

How Would You Compare Your Water Service With the
Other Communities in This Area?*

(In Percentages)

TABLE 4-4

Have You Taken Part in Any Community Issues
Involving Water Matters in This Area?

(In Percentages)

	<u>Much Better</u> Better	About the Same	<u>Poorer</u> Much Poorer	Totals	Yes	No	Totals
Happy Valley		No Data Available			10	90	100(131)
Stone's Throw	28	47	25	100(104)	9	91	100(110)
Rambler	14	44	42	100(107)	13	87	100(115)
Aspiration	9	41	50	100(181)	17	83	100(190)
Euphoria	17	74	10	101(311)	5	94	99(382)

*The question was asked with the alternatives of
much better, better, about the same, poorer, much
poorer. The alternatives were combined for presentation.

as welcome at their community meetings. Stone's Throw is the only incorporated community among those studied.

In our analysis of water activities, we have come to regard the articulation of complaints as a distinct and separate form of participation in decisional activities. As we shall demonstrate, making complaints is a specialized way of generating activity within a service organization. It is one way for administrators to learn about the environment of the organization. Like any interaction, it is not unidirectional. How the organization responds to complaints is a means of projecting its image. Clientele attitudes and behavior toward the agency may depend on perceptions of the agency. Consequently, the success of complaints can be said to constitute an important communications medium for water administrators and their clientele.

Data on the making of complaints show again that water matters are of importance to the communities. A majority of respondents in four communities and 47% in the fifth report they have complained to someone--family, friends, officials, community leaders or others. Within the three communities making up the New Suburb sample, the level of complaint-making clusters around 75%. Our communities vary from high to very high in the volume of complaints about water.

In terms of the perceptions and orientations toward local water administration, respondents in all communities tend to regard water as a matter of importance to their community. Participation in local issues involving water is neither extensive nor non-existent. All three dimensions--approval, participation, and complaining--indicate that water is a salient matter to the communities. Consequently, our research sites are viable testing grounds for our type of investigation.

TABLE 4-5

Do You Feel You Would Be Welcome at a City or
Community Meeting to Discuss Water Matters?
(In Percentages)

TABLE 4-6

Have You Discussed Your Complaints About Water
Matters With Any Groups?
(In Percentages)

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	Yes	Probably	Probably Not	No	Totals	Yes	No	Totals
Happy Valley	52	38	6	3	99(130)	58	42	100(132)
Stone's Throw	69	18	8	5	100(110)	72	28	100(111)
Rambler	32	42	12	14	100(111)	78	22	100(117)
Aspiration	34	37	15	14	100(189)	80	20	100(201)
Euphoria	53	35	7	5	100(356)	47	53	100(319)

Socio-Economic Characteristics

The social context of the local water systems can be depicted efficiently by examining a few core variables known to have an impact on perceptions: age, length of residence, occupation, income, and education.² From these, we can see the nature of the social environment and the variations in them to which the different water systems have to relate.

As one moves from the rural to the urban and suburban communities, a shift in the dominant age groupings can be seen. Four communities are characterized by 25 to 45 year old residents. In Euphoria, however, there are less differences in the age groups. Consequently, we can see that Euphoria residents are relatively older. It is clear that the vast majority of the respondents are likely to be at the age when their concerns are centered around families, homes, and careers.

Given the age distributions, the stability of the community becomes a relevant concern. One indicator of such stability is the turnover among residents. The patterns among length of residence are not helpful in differentiating the communities. All reflect the growth of the state. A majority of respondents have resided in the area less than 7 years. Only the rural community has a significant proportion with over 15 years tenure. Aspiration, the new suburb, has only 3% of its residents with over 7 years in residence. A cumulative picture emerges of geographically mobile, young to middle-aged people. The selected communities appear to be dominated by population categories that characterize the United States as a whole.

A more definitive picture of the research communities can be gained by examining their self-reported socio-economic characteristics.

²See: Campbell, Angus, Phillip E. Converse, Warren E. Miller, and Donald E. Stokes, The American Voter, John Wiley & Sons, New York, 1960.

TABLE 4-7

Age
(In Percentages)

TABLE 4-8

Length of Residence in Water Service Area?
(In Percentages)

	Age					Totals	Length of Residence in Water Service Area?					Totals
	Under 24	25- 34	35- 44	45- 54	Over 55		Less Than 6 mo.- 17 mo.	18 mo.- 3 yrs.	3- 7 yrs.	7- 15 yrs.	15 yrs +	
Happy Valley	13	32	27	12	16	100(132)	28	15	20	13	25	101(132)
Stone's Throw	14	34	33	11	8	100(111)	23	16	21	40	1	101(111)
Rambler	10	34	40	10	5	99(117)	24	21	39	15	2	101(117)
Aspiration	7	50	32	10	3	102(200)	25	23	50	2	1	101(201)
Euphoria	9	19	25	24	23	100(383)	30	16	23	21	10	100(374)

The problem can best be approached through utilization of objective indices of social status: occupation, education, and income.³ The first of these is shown in Table 4-9.

Occupational types were categorized into social status types listed. The patterns bear out the earlier description. Only Happy Valley, the rural-suburban water district, has a substantial number of farmers. Euphoria joins Happy Valley in having a plurality in upper-middle class pursuits. Aspiration and Euphoria trail behind the others in blue collar occupations. Stone's Throw and Rambler have the smallest group of upper-middle class types. Stone's Throw is distinct with its plurality of blue collar types. The research communities are diverse and cover the spectrum in the work lives of the respondents.

Given the tendency toward cumulativeness in indices of social status, the patterns on the other measurements can be expected to approximate occupations. The five research sites are inhabited by predominantly middle income people. The older suburb, Euphoria, has a concentration in the high income brackets that the others do not. The most rural of the group has the greatest portion of low income people. The newer suburbs, Aspiration and Rambler, do not have as many low income respondents as the other communities. Contrasting tendencies mark the respondent groupings within the context of middle income dominance.

While the indicators of social status do tend to reinforce one another, they do not correlate perfectly. Educational attainments are not rewarded automatically with status or income. Disparities occur for a variety of reasons--scarcity of some skills, surplus of others, etc.

³ Ibid.

TABLE 4-9

Class of Respondent or Breadwinner
(In Percentages)

TABLE 4-10

Income
(In Percentages)

	Class of Respondent or Breadwinner (In Percentages)				Totals	Income (In Percentages)							Totals
	Upper Middle Class	Middle Class	Blue Collar	Farmer		Under 2,500	2,500- 5,000	5,000- 7,499	7,500- 9,999	10,000- 14,999	15,000- 24,999	Over 25,000	
Happy Valley	39	22	24	15	100(120)	5	16	33	26	16	4	1	101(121)
Stone's Throw	24	34	42	1	101(110)	4	11	33	35	15	1	0	99(105)
Rambler	24	56	21	0	101(117)	2	6	28	34	27	4	0	101(109)
Aspiration	30	59	11	1	101(200)	1	2	29	37	25	4	1	99(194)
Euphoria	48	38	14	0	100(257)	5	9	15	24	33	12	2	100(354)

Furthermore, education is a separate social resource in terms of skills, information, and social style. Acquisition of these qualities orients one toward greater involvement in social processes.⁴ Consequently, it is important to investigate it apart from the others. Table 4-11 shows that the plurality of all the community groups possess high school diplomas. In line with its blue collar orientation, Stone's Throw residents are concentrated in the lower education categories. Happy Valley and Euphoria are the most diverse in types. The latter has the highest level of those who obtained a college degree. People who attended and did not finish college appear in equal proportions in all communities.

In education as well as the other characteristics, the five communities differ from one another. They offer some nice contrasts as well as similarities. All have a substantial proportion of "middle" types who are in the center of occupational, income, and educational ladders. However, some appear to be centered around those categories (Rambler and Aspiration). The rural suburban area is more diverse in social types (Happy Valley). The other community with some diversity must also be noted for its upper-middle class orientation (Euphoria) and there is a low income, blue collar area (Stone's Throw).

Community Decisional Processes

The third major set of dimensions for comparative analysis are concerned with the nature of involvement in decisional processes. The

⁴See: Almond, Gabriel, and Sidney Verba, The Civic Culture, Princeton University Press, Princeton, New Jersey, 1963.

TABLE 4-11

Education
(In Percentages)

TABLE 4-12

How Interested Are You in Politics?
(In Percentages)

	Below High School	High School, Trade School	Some College	College, Graduate School, Law School	Totals	Very much <u>so</u> Somewhat	Only <u>Slightly</u> Not at all	Totals
Happy Valley	21	43	18	17	99(132)	70	29	99(131)
Stone's Throw	38	40	19	3	100(111)	53	47	100(111)
Rambler	22	52	17	9	100(117)	53	47	100(115)
Aspiration	19	52	14	16	101(201)	60	40	100(201)
Euphoria	16	39	18	27	100(385)	62	37	99(374)

first tables deal with respondent identifications with the political system---the last focus on involvement in community issues.

In regard to the former, interest in politics was probed. The responses appear in Table 4-12. Four alternatives were available to the interviewee. Positive and negative choices were combined in the presentation of the table.

The communities are differentiated by the respondents' levels of interest in politics. Happy Valley respondents are more interested than their counterparts in the other communities. The two middle class suburbs cluster below the semi-urban one with the lower middle class-blue collar communities clustering below them. The intervals between them are approximately 10%, with roughly 70% of the Happy Valley respondents reporting high political interest, 60% of Euphoria and Aspiration, and 50% of Rambler and Stone's Throw.

If the question is switched to self-reported voting participation, we find high levels of involvement are maintained with a slight shift in the communities' positions vis-a-vis each other. Typically, respondents report more turnout than actually occurred; but students of voting behavior show that this poses no explanatory problem.⁵ All communities vote at comparably high rates--between 75% and 83%. The middle class suburbs, Aspiration and Euphoria, participate in the eighties and the others in the seventies. The crucial matter for purposes of comparison is that none of the research sites has low turnout. As a whole voting levels approximate those found for the United States generally.

⁵See: Bell, Charles G., and William Buchanan, "Reliable and unreliable respondents: Party registration and prestige pressure," The Western Political Science Quarterly, 19(1), 37-43, March 1966.

TABLE 4-13

Did You Vote in the Last Presidential Election?
(In Percentages)

TABLE 4-14

To Which Political Party Do You Feel Closest?
(In Percentages)

	Yes	No	Totals	Republican	Democratic	Other	Totals
Happy Valley	76	24	100(131)	46	42	12	100(130)
Stone's Throw	75	25	100(110)	26	67	8	101(105)
Rambler	76	24	100(115)	33	48	19	100(107)
Aspiration	83	17	100(198)	40	53	6	99(191)
Euphoria	80	20	100(382)	55	29	16	100(349)

IV-15

Given the clustering of social groupings around each of the major parties, political party can be considered a socio-economic variable. The persistence of the parties' social base has come to denote a life style almost as reliable an indicator as those used in the previous section. Our later analysis will show that party identification is also an important variable in the perceptions of local water administrators.

Within the urban context, the socio-economic character of the suburbs are reflected in the political party identification of the respondents. As the proportions of middle class people increase, the scope of the Republican Party increases. Two suburbs, Euphoria and Stone's Throw approach being one party communities. The others are two party communities. The semi-rural area of Happy Valley has a long history of Republican predominance. Its bipartisan trends are explained by the influx of new residents who are in the majority.

Community decisions and individual participation in them tend to be matters of personal orientation. A number of questions were asked about the individual's involvement in discussions of community matters. The simplest and most general question is whether or not they have been recently involved in a community issue (Table 4-15). The proportion involved are below one-fifth in all communities. However, the levels of participation are slightly higher than one major study where communities were compared on that question. The extent of involvement in community issues concerning water is not significantly lower than for involvement (see Table 4-4). The similarity between the two areas indicates again that water is important to the communities. Further

TABLE 4-15

Have You Taken an Active Part in Any Local Government or
Community Issue During the Past 2 or 3 Years?

(In Percentages)

	Yes	No	Totals
Happy Valley	15	84	99(129)
Stones Throw	17	83	100(109)
Rambler	18	82	100(115)
Aspiration	15	85	100(195)
Euphoria	11	89	100(377)

- dimensions of community involvement will be examined in analyzing water -
decision-making processes.

The communities are characterized by high political interest and high voter turnout. They vary in their partisan orientations from one-party Republican to three mixed systems to a one-party Democratic. Participation in community decisions is a more restricted phenomenon where smaller portions of the population take part. The communities do not significantly differ on this last dimension.

Summary

The five communities share a common trait of high to intense concern about local water affairs. They also provide useful contrast in the social and political characteristics. These characteristics should provide a beneficial testing ground for the analysis of water decision-making.

Chapter V

FINANCIAL ORIENTATIONS AND AGENCY DECISION-MAKING

A most crucial area of interaction of water manager and water user is the area of financial decision-making. Here, the most direct and consistent communication the water user has is his periodical billing for water services. Not too surprisingly, this assessment is an important factor that shapes the user's inclination to tolerate, accept or support various means of financing water services. In an earlier journal article, we analyzed the correlates of predispositions toward supporting alternative revenue sources in one community.¹ This chapter will be devoted to expanding that analysis to include all five communities serving as research sites.

Our interest is in the extent to which consumers of local government services support alternative revenue sources for funding specific services. Intensity of support for alternative sources in financing a water agency is not so important to us as is public acceptance of their use. Government units vary widely in the extent to which they conform to public expectations. All of the research sites are communities which have experienced population growth rates exceeding the fast-growing western region of the United States. Given the intricacies of this changing setting, an agency needs flexibility in developing and maintaining adequate sources

¹Garrison, Charles L. and Duane W. Hill, "The Dynamics of Public Roles in the Selection of Revenue Sources in Local Water Administration," Water Resources Research, Vol. 3, No. 4 (December, 1967), pp. 949-962.

of revenue. Logically, one could expect great reluctance on the part of management to abandon existing revenue producing devices or to have them eliminated as the organization expands and interacts with the environment. One way for the officials to enhance their position in so far as finances are concerned is to minimize antagonism or hostility toward the available revenue-producing instruments. Since rapidly growing populations develop demands to expand services, an agency's needs for income also increase. Consequently, the public is also expected by officials not to resist managerial efforts to meet the district's obligations. Persons who oppose expansion by failing to support any available alternatives merely add to the burdens of the management. They restrict flexibility in the face of rapid growth and increasing diversity of consumers.

The primary means for financing services of the public agencies are legally derived from the body of state legislation authorizing its operation. The methods the agencies now possess legally to finance indebtedness is the power to tax and to issue general obligation bonds. Euphoria's private water agency, of course, does not have the power to tax. Questions concerning mill levies in the Euphoria questionnaire were based on the assumption that the necessary legal and governmental changes would have to be made. This alternative is under continuously active consideration in Euphoria.

Three revenue sources are feasible in all of the communities. Water rates are the most widely used by the water managers to meet their financial obligations. No other means

are employed as a major source. Tax levies on the property within the geographical boundaries of a water agency's jurisdiction is a major alternative to water rates. Use of the property tax would, of course, put the water agency in competition with county and school jurisdictions for tax dollars. Imposition of such taxes would probably generate hostility on the part of the tax conscious residents of the five communities. Rates tend to be perceived as "high" and their combination with tax levies is perceived by water administrators to be a stimulus for additional public resentment. These factors promote the use of rates as the major source of revenue for the water agencies.

The possibility of federal assistance is the third alternative. While such a course is not under active consideration by most water managing bodies, water users respond more favorably to probes concerning federal assistance than to other alternatives. Given this orientation on the part of the water consumer, there are at least three sources of revenue visibly available to the water systems: water rates, property tax levies, and federal aid.

The purpose of this chapter, then, is to show who, in terms of political and sociopsychological categories, is willing to support the income alternatives available to this local government structure. A typology of user orientations toward revenue sources will be employed in the analysis of the data. Those respondents who support the use of all three alternatives are defined as "facilitators." They are willing to

accede to the employment of any or all three of the revenue sources. "Partial facilitators" do not support one and possibly two of the offered sources. "Resistors" oppose all three of the alternatives: rates, tax levies, and federal aid.² Dependent variables are ordered into three sets: socioeconomic, community and water, and attitudinal dimensions.

The first set consists of occupation, income, education, length of residence, and political party. The relevance of all of these classifications for generating greater explanatory power is well established by studies of political behavior and attitudes.³ In addition to social backgrounds, participation in political decision processes merits close examination, because participation has been shown to promote increased knowledge and greater understanding of community problems.⁴ One of our contentions is that the positions on alternative means of financing are associated with different patterns of participation. Several forms are examined: voting, political

²Ibid.

³Alford, Robert R., Party and Society (Chicago: Rand McNally and Company, 1963); Gabriel Almond and Sidney Verba, The Civil Culture (Princeton: Princeton University Press, 1963); Bernard R. Berelson, Paul F. Lazarsfeld, and William N. McPhee, Voting (Chicago: University of Chicago Press, 1954); Angus Campbell, Phillip E. Converse, Warren E. Miller and Donald E. Stokes, The American Voter (New York: John Wiley and Sons, 1960); Robert E. Lane, Political Life (New York: The Free Press, 1959); Seymour M. Lipset, Political Man (Garden City: Doubleday and Company, Inc., 1960); Lester W. Milbrath, Political Participation (Chicago: Rand McNally and Company, 1965); Samuel Stouffer, Communism, Conformity and Civil Liberties (New York: Doubleday and Company, 1955).

⁴Milbrath, op. cit., pp. 44-47.

discussion with formal community leaders, political discussion with peers, discussion of water issues generally (whether national, state or local) with the same groups, as well as complaints about water management to peers and water officials. The latter are conceptualized as a form of participation in the water decision-making process. The first communications item, complaints to friends and neighbors, serves as part of the environment for the decision system, whereas the third, complaints to officials, is an input to the system as a demand on the administrators. All have potential for affecting the behavior of the management. As such, complaint communications are a highly relevant form of participation for water decision-making.

The third set of traits to be examined is attitudinal. In measuring attitudes, we employed Guttman scales.⁵ The purpose was to use standard techniques of social science to classify the water participant. In addition, we added adapted versions of the accepted political attitude scales. Our intention here was to order respondents on attitudinal dimensions regarding water specifically. Only a few are examined at this stage.

⁵Samuel L. Stouffer, Louis Guttman, Edward Suchman, Paul S. Lazarsfeld, Shirley A. Star, and John A. Clausen, Studies in Social Psychology in World War II: Measurement Prediction, Vol. 4 (Princeton: Princeton University Press, 1950); William S. Torgerson, Theory and Methods of Scaling (New York: John Wiley and Sons, 1958), pp. 298-331; Robert N. Ford, "A Rapid Scoring Procedure for Scaling Attitude Questions," Public Opinion Quarterly, 14 (Fall, 1950), pp. 507-533; Andreas F. Henry, "A Method of Classifying Non-Scale Response Patterns in a Guttman Scale," Public Opinion Quarterly, 16 (Spring, 1952), pp. 94-106.

Analysis of data proceeds by holding the financial orientations constant. That is, the categories established earlier, based on preferences for each of the elements making up the sets of dependent variables. In each instance, we elicited responses to specific questions which were designed to obtain the individual citizen's orientation toward each of the policy alternatives. Since rather extensive preliminary investigations indicated that indebtedness was an issue that weighed heavily on the minds of the water management and many members of the public, the issue of debt retirement was selected as a vehicle for measurement. Respondents were asked to indicate the intensity of their approval or disapproval of (1) increasing water rates, (2) seeking federal aid, (3) imposing a mill levy to retire indebtedness. This set of questions sought to specify individual orientations toward the respective alternatives independently. Secondly, the questions constitute an early attempt to probe basic ideological elements (e.g., low tax orientations). A second set sought to measure differential preferences between alternatives (the extent to which respondents favored one alternative over another). Each set of items measure distinctly different dimensions. All questions in both sets were placed among a series of other probes, and respondents had the options of answering each item on a scaled basis that afforded opportunity to indicate intensity.

Measures of differential preference between alternatives failed to yield sufficiently clear orientations for use in

the erection of a classification system. Part of the deficiency of our differential measures may lie in the problem a person faces when he is asked to select between two or more alternatives that he perceives as evil or undesirable. Substantial portions of each sample opposed all three of the independent measures when individuals faced the specific alternatives separately. This does not mean that these individuals wanted to destroy the agency , or that they did not care. Nor does it mean that they had no preferences among the alternatives simply because they found all choices distasteful. Political choices often involve a lesser of two perceived evils.

A second problem with the measures of differential preference may be a tendency for items to contaminate each other when they are juxtaposed. Offering a person two or more choices at the same instant or in the same context frequently cues him to act positively toward one of them when he might not if the two were separated. Whatever the source of our difficulty with measures of differential preference, we were forced to abandon such measures in favor of probes that were offered independently and that did not measure differential preferences.

Table 5-1 shows the distribution of preferences for each alternative. There is a consistent trend of support for federal aid and opposition toward the increased use of rates in the community. Preferences are less intense about the use of tax levies. The largest portions of each community sample are undecided or against the use of tax levies as a means of debt retirement. Greater intensity in preferences is apparent in

Table 5-1

COMMUNITIES: WATER USER PREFERENCES ON RESOLUTION OF INDEBTEDNESS
(Percentages)

Communities	Strongly Approve	Approve	Undecided	Disapprove	Strongly Disapprove	Total
Happy Valley						
Seek Federal Aid	5	29	16	39	11	100(132)
Impose a Mill Levy	4	21	20	42	14	101(132)
Increase Rates	0	21	17	50	12	100(131)
Stone's Throw						
Seek Federal Aid	8	28	17	28	19	100(109)
Impose a Mill Levy	5	29	18	28	20	100(109)
Increase Rates	3	15	16	32	34	100(111)
Rambler						
Seek Federal Aid	3	22	32	26	16	99(116)
Impose a Mill Levy	0	15	37	28	20	100(116)
Increase Rates	1	8	28	33	31	101(117)
Aspiration						
Seek Federal Aid	5	19	32	27	18	101(199)
Impose a Mill Levy	3	22	31	29	16	101(198)
Increase Rates	1	8	23	36	31	99(203)
Euphoria						
Seek Federal Aid	8	16	40	26	10	100(380)
Impose a Mill Levy	2	18	51	23	6	100(369)
Increase Rates	1	15	45	28	11	100(376)

regard to the increased use of rates as means of debt resolution. Dissapproval of rates is expressed by over 60% of the respondents in the first four samples and a plurality of Euphoria residents.

The more middle class, well educated Euphoria resident appears to be less prone to adopt vigorously any of the three alternatives. Our concern is not focused with substantive alternatives so much as the willingness to allow decision-makers latitude in making decisions.

The Social Backgrounds of Financial Preferences

Analysis of social backgrounds are divided into five segments. Use of indices based on numerical values is frustrated by a mixture of life styles in a rapidly changing area. Consequently, the cumulativeness of the indices is not as pronounced as it would be in a more homogeneous and stable environment.

Residence. Newcomers to a community tend to allow water administrators greater flexibility than more stable residents. Table 5-2 shows the relationship between length of residence and the financial orientations. In all of the communities, facilitators were predominantly people who had lived in the district for less than seven years. More than a third of the facilitators in all five localities had resided there less than 18 months. In Happy Valley and Rambler, 72% and 55% respectively of the facilitators were individuals with no more than eighteen months residence. Similarly resisters tended to be more established in the area. While the patterns in the

Table 5-2

COMMUNITIES: FINANCIAL ORIENTATION vs. LENGTH OF RESIDENCE
(Percentages)

Communities	Length of Residence					Total
	0-18 mths.	18 mths.- 3 yrs.	3-7 yrs.	7-15 yrs.	Over 15 yrs.	
Happy Valley						
Facilitators	72	14	14	0	0	100(14)
Partial Facilitators	56	12	13	10	9	100(95)
Resistors	48	16	12	8	17	101(25)
Stone's Throw						
Facilitators	39	15	39	8	0	101(13)
Partial Facilitators	22	17	20	40	1	100(77)
Resistors	12	12	18	59	0	101(17)
Rambler						
Facilitators	55	10	20	15	0	100(20)
Partial Facilitators	17	24	43	13	3	100(70)
Resistors	20	20	40	20	0	100(20)
Aspiration						
Facilitators	35	27	38	0	0	100(34)
Partial Facilitators	21	26	50	3	1	101(121)
Resistors	26	13	59	3	0	101(39)
Euphoria						
Facilitators	39	18	18	17	8	100(83)
Partial Facilitators	28	18	25	22	8	101(158)
Resistors	30	13	24	23	11	101(106)

data are somewhat obscure, one can argue that the trends do show a negative relationship of length of residence to the willingness to allow much flexibility in the formulation of financial policy by the local water administration.

Income. Income is one of the more difficult classificatory variables to use in data analysis. Social scientists have made much of the patterns of social stratification inherent in industrial society. Annual income is one of the more pronounced indices of social ranking. However, sole reliance on income as a ranking device ignores several determinants of annual income. Life style is certainly one of those dimensions which is related to but not directly measured in the array in Table 5-3.

Regularities are present, if obscure, in the data. The patterns appear to vary with the type of community. The semi-rural Happy Valley has a clear pattern of facilitators associated with low income. The same trends are more evident in Stone's Throw. Resistors are clearly the opposite. They are concentrated in the middle and upper income classifications.

The configurations are less clear when the communities with substantial portions of middle class individuals are examined. Resistors in Rambler occur less frequently in the low income group than the other two groups. They do not, however, predominate in the high income group. Facilitators do.

In the diverse middle class communities, the patterns are more obscure. In Aspiration, the patterns are restricted to the middle and upper income levels. Three-fourths of the

Table 5-3

COMMUNITIES: FINANCIAL ORIENTATIONS vs. INCOME
(Percentages)

Communities	Income			Total
	Below \$5,000	\$5,000- \$10,000	Over \$10,000	
Happy Valley				
Facilitators	45	27	27	99(11)
Partial Facilitators	19	63	19	101(86)
Resistors	17	58	25	100(25)
Stone's Throw				
Facilitators	31	54	15	100(13)
Partial Facilitators	12	75	12	99(73)
Resistors	12	50	38	100(16)
Rambler				
Facilitators	11	53	37	101(19)
Partial Facilitators	9	63	29	101(70)
Resistors	5	68	26	99(19)
Aspiration				
Facilitators	3	72	25	100(32)
Partial Facilitators	3	66	31	100(118)
Resistors	0	61	40	101(38)
Euphoria				
Facilitators	18	39	44	101(80)
Partial Facilitators	8	37	56	101(155)
Resistors	19	46	35	100(96)

facilitators are not in the high income group in which 40% of the resisters fall. The index of financial orientations fails to discriminate among income groups in Euphoria. The latter is a community of heterogeneous social groups where income, by itself, would not be as useful as a classificatory device as other dimensions.

Occupation. Occupational status was used as another dimension to delineate the bases of financial orientations. The consistency of the trends in Table 5-4 across five communities is not very high although each community seems to exhibit some patterns in its relationships. In Happy Valley, resisters tend to pursue high status occupations. Facilitators in Stone's Throw follow blue collar occupations. There is an increase in proportions in middle class occupations as one moves from Stone's Throw facilitators to resisters. In Rambler, a plurality of resisters occupy high status positions. In Euphoria, there is a prevalence of high status occupations in all groups but there is an increasing proportion of middle class occupations in the two groups which are not willing to be completely facilitative. Aspiration financial orientations appear to be unrelated to any occupational status.

In short, patterns are not clear cut in all five communities. There does appear to be a tendency for facilitators to be from low status occupations and resisters from middle or high status pursuits. The two dominantly middle class communities show the complexity which clouded the income patterns.

Table 5-4

COMMUNITIES: FINANCIAL ORIENTATIONS vs. OCCUPATIONS
(Percentages)

Communities	Occupations				Total
	Upper* Middle Class	Middle** Class	Blue*** Collar	Farmer****	
Happy Valley					
Facilitators	37	36	18	9	100(8)
Partial Facilitators	35	21	27	17	100(59)
Resistors	60	17	17	6	100(13)
Stone's Throw					
Facilitators	23	23	54	0	100(13)
Partial Facilitators	25	36	38	1	100(76)
Resistors	17	39	44	0	100(18)
Rambler					
Facilitators	15	70	15	0	100(20)
Partial Facilitators	21	58	21	0	100(76)
Resistors	40	35	25	0	100(20)
Aspiration					
Facilitators	38	53	9	0	100(34)
Partial Facilitators	27	62	12	0	101(121)
Resistors	33	56	8	3	100(39)
Euphoria					
Facilitators	55	30	15	0	100(74)
Partial Facilitators	49	37	14	1	101(147)
Resistors	43	38	16	3	100(102)

* Upper Middle Class includes professionals, proprietors, managers, and officials.

** Middle Class includes clerks, salesmen, and craftsmen.

*** Blue Collar includes machine operators, laborers, farm workers, foremen, and service workers.

**** Farmer includes farm owner and manager.

Education. Table 5-5 shows the relationship of educational attainment to financial orientations. The Happy Valley pattern of the low educated facilitator and the moderately educated resistor is repeated in three communities. In Stone's Throw and Happy Valley, the modal resistor is a college dropout. In the remainder, the high school graduate is the norm. The resistor in Rambler and Euphoria is likely to be poorly educated. He may be expressing the frustrations of a person out of step with the dominant trends of his community. The Euphoria trends suggest this conclusion with the prevalence of the college educated.

Political Party. Early in our research we assumed that political party would have discriminating power as a classificatory variable (Table 5-6). The Happy Valley data indicated this. However, the other communities do not bear this out in regard to financial orientations.

In an article on Happy Valley,¹ we presented a portrait of linkages between social variables and financial predispositions. But the generalizations from Happy Valley did not stand up. The hypothesized relationships were reversed in tests of the other communities. Resistors were middle class and highly educated where earlier we depicted them as a relatively low educated, working class type. However, the five community comparison indicated that rather than rejecting our original scheme, it should be adjusted to the type of community. Data from Aspiration and Euphoria, especially the latter, indicate that

¹Hill, Duane W., Charles L. Garrison, and Charles J. Tripp, "The Impact of a Water Agency's Image: A Study in the Politics of Public Relations," Paper, delivered at the Rocky Mountain Social Science Convention (May, 1968).

Table 5-5

COMMUNITIES: FINANCIAL ORIENTATIONS vs. EDUCATION
(Percentages)

Communities	Education				Total
	Below high school	High school graduate	College Dropout	College graduate	
Happy Valley					
Facilitators	28	36	14	21	99(14)
Partial Facilitators	23	48	14	15	100(93)
Resistors	12	28	36	24	100(25)
Stone's Throw					
Facilitators	39	39	8	15	101(13)
Partial Facilitators	38	34	21	8	101(77)
Resistors	21	18	50	11	100(28)
Rambler					
Facilitators	25	50	15	10	100(20)
Partial Facilitators	17	41	18	24	100(76)
Resistors	35	40	15	10	100(26)
Aspiration					
Facilitators	21	41	12	27	101(34)
Partial Facilitators	22	38	15	25	100(121)
Resistors	5	64	13	18	100(39)
Euphoria					
Facilitators	14	28	15	43	100(86)
Partial Facilitators	14	39	17	40	100(151)
Resistors	23	31	15	30	99(111)

Table 5-6

COMMUNITIES: FINANCIAL ORIENTATIONS vs. POLITICAL PARTY
(Percentages)

Communities	Political Party			Total
	Rep.	Dem.	Other	
Happy Valley				
Facilitators	50	50	0	100(14)
Partial Facilitators	44	44	12	100(92)
Resistors	48	24	28	100(24)
Stone's Throw				
Facilitators	38	62	0	100(13)
Partial Facilitators	20	69	11	100(71)
Resistors	33	67	0	100(18)
Rambler				
Facilitators	25	63	13	100(16)
Partial Facilitators	36	49	16	101(70)
Resistors	30	35	35	100(20)
Aspiration				
Facilitators	43	53	3	99(30)
Partial Facilitators	41	51	8	100(117)
Resistors	37	58	5	100(38)
Euphoria				
Facilitators	51	35	14	100(78)
Partial Facilitators	63	21	16	100(155)
Resistors	46	39	15	100(91)

respondents in communities with dominantly middle class characteristics will have our projected socio-economic traits. This relationship would be consistent with the findings of the socio-political behavior in our original model. High levels of socio-political participation and developed ideologies are attributes of the American middle class.

Dimensions of Political Participation

Participation in decisional activities also has high relevance for financial orientations. Essentially we are asking how are these ideological preferences articulated and applied in the community? Types and patterns of participation answer this question.

Voting. There is a consistency in the self-reported voting participation patterns in Table 5-7. This benchmark of political participation is a discriminating variable in delineating financial types. In the first four communities, the proportion of voters increases as one moves from facilitator to resistor and non-voters decrease. In the fifth community, Euphoria, there is no clear relationship. However, resisters appear to turn out less than the other two groups.

The Euphoria pattern could be due to the social diversity of the community or to the higher level of self-reported electoral participation of the respondents. Voting in national elections might be an established norm in the middle class context of Euphoria where, in the other less stable communities, those with higher political interest are more likely to vote. Self-

Table 5-7

COMMUNITIES: FINANCIAL ORIENTATIONS
vs.
VOTING IN NATIONAL ELECTIONS
(Percentages)

Communities	Voting	Not Voting	Total
Happy Valley			
Facilitators	64	36	100(14)
Partial Facilitators	76	24	100(93)
Resistors	84	16	100(25)
Stone's Throw			
Facilitators	62	38	100(13)
Partial Facilitators	75	25	100(76)
Resistors	83	17	100(18)
Rambler			
Facilitators	60	40	100(20)
Partial Facilitators	77	23	100(74)
Resistors	90	10	100(20)
Aspiration			
Facilitators	70	30	100(33)
Partial Facilitators	85	15	100(120)
Resistors	90	10	100(39)
Euphoria			
Facilitators	80	20	100(83)
Partial Facilitators	84	16	100(161)
Resistors	77	23	100(111)

reported voting may exceed actual participation in elections by several percentage points but this presents no analytic difficulties.²

Peer political discussion. A more direct form of participation is the frequency of discussion of political matters with friends. This is another way of assessing whose values are being articulated in the system. Political discussion with friends will be the point of the departure. The same means of transmission will be examined with regard to local water problems.

As in voting, resistors tend to participate more in discussion of government with friends (Table 5-8)). A more accurate way to say it is that facilitators and partial facilitators are more likely to be non-participants. Greater portions of resistors than the other groups discuss government often. In some cases, there appear to be little differences between the polar groups among high participants in Happy Valley and low participants in Rambler, but when the other end of the participation dimension is examined, patterns do emerge with the same outcome. Again, Euphoria data do not follow the other four communities. These patterns are not, by this time, unfamiliar. Differences are less extensive and the results run counter to the others. Middle class respondents in Euphoria seem to have

²Bell, Charles G., and William Buchanan, op. cit.

Table 5-8

COMMUNITIES: FINANCIAL ORIENTATIONS
vs.
DISCUSS GOVERNMENT WITH FRIENDS
(Percentages)

Communities	Often	Once in a While	Not at All	Total
Happy Valley				
Facilitators	43	36	21	100(14)
Partial Facilitators	37	45	18	100(92)
Resistors	48	48	4	100(25)
Stone's Throw				
Facilitators	23	39	39	101(13)
Partial Facilitators	33	39	18	100(77)
Resistors	44	33	22	99(18)
Rambler				
Facilitators	0	45	55	100(20)
Partial Facilitators	33	47	20	100(75)
Reisitors	20	27	53	100(30)
Aspiration				
Facilitators	12	39	49	100(33)
Partial Facilitators	40	45	15	100(119)
Resistors	46	36	18	100(39)
Euphoria				
Facilitators	41	34	25	100(83)
Partial Facilitators	45	45	10	100(162)
Resistors	35	29	36	100(107)

a greater willingness to allow decision-makers more flexibility than their counterparts in communities with less resources.

Frequency distributions in Table 5-9 concerning discussion of water problems with friends and neighbors are similar to the previous tables. Resisters have higher discussion rates than the other groups in the first four communities with a faint tendency in the other direction in Euphoria.

A third mode of participation to be investigated is complaints about water services. The conceptualization of complaints as a political participation variable is based upon distinctions in attitudes and behavior between those who complain and those who do not. Variations in form and substance of support and identification with water administrators demonstrate that complaints and non-complainants are viable political classifications. Furthermore, our data show that, for some respondents, complaints about water service are distinct from discussion about water.

The results of the patterns are much the same as previous tables (Tables 5-10). In the first four communities, facilitators are marked by their lack of complaints when compared to the other categories.

Interaction with officials. Another level of participation is the more restricted area of interaction with authoritative decision-makers and local government officials. The possibility does exist that a water user may approach community influentials to attempt to influence the behavior of the

Table 5-9

COMMUNITIES: FINANCIAL ORIENTATIONS			
vs.			
DISCUSS WATER PROBLEMS WITH FREINDS AND NEIGHBORS			
(Percentages)			
Communities	High Discussion	Low Discussion	Total
Happy Valley			
Facilitators	36	65	101(14)
Partial Facilitators	50	51	101(92)
Resistors	64	36	100(25)
Stone's Throw			
Facilitators	54	46	100(13)
Partial Facilitators	57	43	100(76)
Resistors	59	41	100(17)
Rambler			
Facilitators	39	61	100(18)
Partial Facilitators	62	38	100(73)
Resistors	67	33	100(18)
Aspiration			
Facilitators	25	75	100(32)
Partial Facilitators	63	37	100(120)
Resistors	74	26	100(39)
Euphoria			
Facilitators	23	77	100(86)
Partial Facilitators	34	66	100(160)
Resistors	15	85	100(110)

Table 5-10

COMMUNITIES: FINANCIAL ORIENTATIONS
vs.
COMPLAIN ABOUT WATER TO FRIENDS AND NEIGHBORS
(Percentages)

Communities	Complain	Do Not Complain	Total
Happy Valley			
Facilitators	29	71	100(14)
Partial Facilitators	44	56	100(93)
Resistors	72	28	100(25)
Stone's Throw			
Facilitators	23	77	100(13)
Partial Facilitators	64	36	100(77)
Resistors	67	33	100(18)
Rambler			
Facilitators	35	65	100(20)
Partial Facilitators	72	28	100(76)
Resistors	75	25	100(20)
Aspiration			
Facilitators	44	56	100(34)
Partial Facilitators	78	22	100(121)
Resistors	77	23	100(39)
Euphoria			
Facilitators	61	39	100(26)
Partial Facilitators	76	24	100(71)
Reisitors	65	35	100(43)

officials. The probability is reduced by the suburban or underdeveloped contexts in which these administrative systems function. There are few social and political structures to complement the administrative structure of the water agency in either the semi-rural areas or the bedroom suburbs of the metropolitan areas.

Consequently, discussion of local governmental problems is a restricted activity of water users (Table 5-11). Since a high level of such discussion is far from typical, the relationships do not appear to be strong but they are somewhat consistent across the communities and with the other dimension previously investigated. Once again, as one moves from facilitator to resistor, participation increases and non-participation decreases except for Euphoria, where the existing pattern again runs counter to those of the first four. Consistent participation is almost the sole property of the resisters and Euphoria facilitators.

Discussion of water problems with officials is carried out differently than discussion of local government. As table 5-12 shows there is little clarity as one compares communities except that there is a variable affecting their behavior. In Happy Valley and Aspiration facilitators discuss less than the other two groups. In Stone's Throw, Rambler, and Euphoria, facilitators engage in more discussions. Interactions with water officials seems to have an association with financial predispositions. The factor may be a function of communications itself. This phase is investigated in another chapter.

Table 5-11

COMMUNITIES: FINANCIAL ORIENTATIONS
vs.
DISCUSS LOCAL GOVERNMENT MATTERS WITH OFFICIALS
(Percentages)

Communities	Often	Once in a While	Not at All	Total
Happy Valley				
Facilitators	0	14	86	100(14)
Partial Facilitators	3	35	62	100(93)
Resistors	0	28	72	100(25)
Stone's Throw				
Facilitators	0	23	77	100(13)
Partial Facilitators	4	40	56	100(77)
Resistors	11	33	56	100(18)
Rambler				
Facilitators	6	17	78	101(18)
Partial Facilitators	3	17	80	100(76)
Resistors	20	5	75	100(20)
Aspiration				
Facilitators	3	13	84	100(32)
Partial Facilitators	6	13	81	100(119)
Resistors	10	15	74	99(39)
Euphoria				
Facilitators	16	17	68	101(84)
Partial Facilitators	9	19	73	101(160)
Resistors	9	10	80	99(106)

Table 5-12

COMMUNITIES: FINANCIAL ORIENTATIONS
vs.
DISCUSS WATER PROBLEMS WITH WATER OFFICIALS
(Percentages)

Communities	Discuss	Do Not Discuss	Total
Happy Valley			
Facilitators	7	92	99(14)
Partial Facilitators	12	88	100(92)
Resistors	12	88	100(25)
Stone's Throw			
Facilitators	23	77	100(13)
Partial Facilitators	16	84	100(76)
Resistors	18	82	100(17)
Rambler			
Facilitators	17	83	100(18)
Partial Facilitators	25	75	100(73)
Resistors	6	94	100(18)
Aspiration			
Facilitators	9	91	100(32)
Partial Facilitators	13	87	100(119)
Resistors	15	85	100(39)
Euphoria			
Facilitators	18	82	100(85)
Partial Facilitators	9	91	100(159)
Resistors	4	96	100(110)

COMMUNITIES: FINANCIAL ORIENTATIONS vs. COMPLAIN TO OFFICIALS
(Percentages)

Communities	Complain	Do Not Complain	Total
Happy Valley			
Facilitators	7	93	100(14)
Partial Facilitators	18	82	100(93)
Resistors	28	72	100(25)
Stone's Throw			
Facilitators	15	85	100(13)
Partial Facilitators	29	71	100(77)
Resistors	33	67	100(18)
Rambler			
Facilitators	25	75	100(20)
Partial Facilitators	49	51	100(76)
Resistors	25	75	100(20)
Aspiration			
Facilitators	15	85	100(34)
Partial Facilitators	30	70	100(121)
Resistors	36	64	100(39)
Euphoria			
Facilitators	21	79	100(57)
Partial Facilitators	32	68	100(90)
Resistors	17	83	100(65)

The remaining dimension to be investigated is the complaint medium. In a prior analysis of Happy Valley, we concluded that complaints had great potential as a means of classification, but the consistency of the data over several dimensions showed the resistor as highly involved in several modes of participation. Complaining appeared to be one of several avenues of participation. Again, our original conception should be modified rather than rejected. Table 5-13 contains regular patterns. Resistors in three of the communities have high complaint rates. But in Aspiration and Euphoria, partial facilitators have the highest level.

These distributions support the contention that complaints do lead to restrictive orientations toward financial alternatives. At no point did those people who were predisposed toward allowing officials wide discretion have many complaints. The two orientations inclined toward one or more restrictive preferences were associated with complaint activities.

Summary

Classified types of financial orientations maintain a rather sturdy consistency in a cross community comparison. In four of the five communities, resistors are middle class persons active in local governmental discussions and, in most cases, tend to complain about water matters. Facilitators tend to be the people likely to have low levels of social skills and information about community decisional activities. Generally, participation

rates of the resistor are higher in these four communities than that of the other groups.

The exception to these trends is the established, more heterogeneous middle-class Euphoria. The patterns are more obscure and differences are smaller. Results do run counter to other communities. Facilitators do have the activist characteristics and behavior of the resistor of the other four communities.

Explanations for this contrast may originate from two sources. First, the culture of the community may be oriented toward their participants allowing water decision-makers flexibility. Secondly, water is not as salient a matter to Euphoria residents as the users in other research sites. This relative lack of interest may not generate the intensity to produce the clear patterns shown in the other four communities.

Finally, the data indicate that the financial orientations are a component of an individual's ideology. Furthermore, these preferences are differentially distributed in their communities due to the social origins and participation levels of those holding different orientations. In general, water managers are more likely to hear from the financially restrictive and not hear from those predisposed toward flexibility. If this particular outcome shows up later in more sophisticated designs, we may have put our finger on one of the more serious deficiencies in the communication system which could be rather crucial for the policy-makers and could be a factor which influences the

character and quality of policy rather dramatically. If sources of support do not make their wants and needs known to the policy-maker, he is likely to have distorted perceptions of the wants and needs in his system.

Chapter VI

AGENCY IMAGE AND USER PERCEPTIONS

One of the more salient characteristics of a successful organization is the ability to relate effectively to its clientele. This relationship depends upon the achievement and maintenance of clientele support. Negative perceptions must be handled so that disaffected individuals and groups are not oriented toward threatening the organization's status and functions. The nature, distribution, and articulation of negative perceptions are not only a source of activity for the decision-makers to respond to, they are a means by which the functions and acceptance of water agency could be disrupted or questioned through mobilization of dissident elements.

This perception is reinforced by the investigator's conversations with decision-makers, engineers, administrators in water activities. The data in this chapter emphasize the relevancy of negative perceptions. Their intensity combined with the willingness of the water user to act may well prove precarious to bases of the organization's support.

Dissident publics must be evaluated by the administrator under conditions of uncertainty. Due to accident, necessity, or ignorance, a poor image of either a specific administrator, agency, or program can result. Such an impression may prove costly to the manager if he has to gain widespread support for his programs. Public decision-makers implicitly request

mandates to make unspecified future choices. If public confidence is lowered, leaders may find their autonomy severely restricted in future enterprises. Such limitations result in various forms of organizational instability--turnover of personnel, large scale shifts in policy orientations, or reductions of budgetary support. Consequently, their public image is indicative of the water administrator's future ability to perform agency functions.

The focus of this chapter is on the sources, articulation, and application of negative perceptions. The generalizations stated in the first chapter deal with the dimensions of: 1) identifications with community and water affairs, and 2) the forms and patterns of participation in water and community decisional processes.

In order to assess negative perceptions, several questionnaire items were formulated. One of the more discriminating items and one of the more damning judgments was the statement "water officials are doing a lousy job and ought to be replaced." This simple assessment is utilized as our analytic vehicle for negative perceptions. Representative tables have been selected for exploration of the dominant patterns of negative perceptions. Additional tables are furnished without comment.

The first set of tables concerns user identifications and perceptions of community and local water decisional processes. Community identification is examined in Table 6-1.

Table 6-1

COMMUNITIES: WATER OFFICIALS ARE DOING A LOUSY JOB
 vs.
 COMMUNITY EVALUATION
 (In Percentages)

<u>Communities</u>	<u>Excellent</u>	<u>Fair</u>	<u>Not Good</u>	<u>Totals</u>
Happy Valley				
Agree	41	55	5	101(22)
Ambivalent	49	49	2	100(59)
Disagree	71	24	6	100(34)
Stone's Throw				
Agree	27	59	14	100(37)
Ambivalent	29	63	9	101(35)
Disagree	32	59	9	100(22)
Rambler				
Agree	29	61	10	100(31)
Ambivalent	37	52	10	99(48)
Disagree	79	21	0	100(14)
Aspiration				
Agree	55	41	2	99(61)
Ambivalent	40	57	4	101(82)
Disagree	47	47	5	99(19)
Euphoria				
Agree	54	37	8	99(83)
Ambivalent	67	32	2	101(114)
Disagree	57	40	3	100(92)

The patterns are quite consistent, especially in working class communities. Those who evaluate their community positively tend to disagree with the statement that water officials are doing a lousy job. Those with low identifications are more likely to agree with the statement. The glaring exception is the community of Aspiration where the patterns are opposite to the other groups. Water administration in Aspiration is controlled by the city of Stone's Throw. Aspiration's residents have no voice in water decision-making and they have a high community identification. Their middle class traits would suggest that they would expect or aspire to participate in decisions regarding their community. The implication of the data in Table 6-1 is that negative perceptions are related to relatively low identification with the community. There is also a suggestion that water agencies external to the locality may encounter this identification as a barrier to a good image.

The salience of negative perceptions to the water agency becomes more clear when involvement of the user in water matters is investigated. Interest in water matters is a basic indicator of user involvement. Although the level of interest in water matters is consistently high, negative perceptions are associated with high interest. Those respondents with less negative reactions to the interview item are more likely to be less interested in water matters (see Table 6-2).

Table 6-2

COMMUNITIES: WATER OFFICIALS ARE DOING A LOUSY JOB
vs.
INTEREST IN LOCAL WATER MATTERS
(In Percentages)

Communities	Interested	Not Interested	Total
Happy Valley			
Agree	96	4	100(22)
Ambivalent	90	10	100(59)
Disagree	88	12	100(34)
Stone's Throw			
Agree	86	14	100(37)
Ambivalent	77	23	100(35)
Disagree	77	23	100(22)
Rambler			
Agree	97	3	100(31)
Ambivalent	76	24	100(50)
Disagree	67	33	100(15)
Aspiration			
Agree	94	6	100(52)
Ambivalent	90	10	100(86)
Disagree	81	19	100(21)
Euphoria			
Agree	73	27	100(78)
Ambivalent	57	43	100(114)
Disagree	30	70	100(92)

A similar and more dramatic pattern can be seen in Table 6-3. Here, the water user is asked to make judgment on the management of the local water supply. Replies were categorized into satisfactory and poor. Again, those who do not agree with the harsh assertion about water officials will express feelings of satisfaction with the local water leadership. The item employed as a negative perception is useful as a device to discriminate among other orientations toward the water system.

Response to the idea of alternative water structures were collected and arrayed with the negative perception. Again, those who indicated that there were alternatives to the present type of system were those with dim views of the authorities in that system (see Table 6-4).

The repetitiveness of the patterns in these tables should convey the consistency in the respondents perceptions. One can argue that these patterns are self-fulfilling, i.e., negative feelings toward water officials and low community identification, high interest in water, low opinion of local water management, and support for alternatives are all different aspects of an underlying dimension which should have great consistency. Yet, we should remember that one of the basic contributions of survey research has been to show the underdeveloped and disjointed character of ideological formulations and perceptions of society. The con-

Table 6-3

COMMUNITIES: WATER OFFICIALS ARE DOING A LOUSY JOB
 vs.
 LOCAL WATER SUPPLY IS MANAGED
 (In Percentages)

Communities	How Well is Local Water Supply Managed?		Total
	Satisfactory	Poor	
Happy Valley			
Agree	42	58	100(19)
Ambivalent	81	19	100(53)
Disagree	96	4	100(25)
Stone's Throw			
Agree	70	30	100(37)
Ambivalent	83	17	100(35)
Disagree	86	14	100(22)
Rambler			
Agree	27	73	100(30)
Ambivalent	53	47	100(49)
Disagree	81	19	100(16)
Aspiration			
Agree	20	80	100(61)
Ambivalent	32	68	100(87)
Disagree	60	40	100(20)
Euphoria			
Agree	46	54	100(60)
Ambivalent	83	17	100(99)
Disagree	95	5	100(76)

Table 6-4

COMMUNITIES: WATER OFFICIALS ARE DOING A LOUSY JOB
 vs.
 WORKABLE ALTERNATIVES
 (In Percentages)

Communities	Are There Workable Alternatives?		Total
	Yes	No	
Happy Valley			
Agree	63	37	100(19)
Ambivalent	51	49	100(53)
Disagree	45	55	100(31)
Stone's Throw			
Agree	72	28	100(32)
Ambivalent	63	38	101(32)
Disagree	62	38	100(21)
Rambler			
Agree	81	19	100(27)
Ambivalent	81	19	100(43)
Disagree	23	77	100(13)
Aspiration			
Agree	87	13	100(52)
Ambivalent	87	13	100(71)
Disagree	71	29	100(17)
Euphoria			
Agree	90	10	100(71)
Ambivalent	61	39	100(92)
Disagree	52	48	100(50)

sistency of these patterns reflects a salience to the resident which distinguishes water matters from other areas of public concern. The most relevant question now is the application of these to the community in participation in decision-making.

Participation in the Water System

Four dimensions of participation are assessed to show how these perceptions are translated into behavior. Participation in local water matters is a specialized activity of a few citizens. The fact that it is not a widespread activity adds to the fascination of analysing some of its determinants (Table 6-5).

The simplest approach to participation in local water matters is asking respondents whether they do, in fact, engage in such an activity. When the "lousy job" question is held constant, the differential participation rate is apparent. In Happy Valley, the categories fail to discriminate. Stone's Throw water participants who are furnished water by their city administration are less negative than non-participants. In the three remaining communities, participants do agree that water officials are doing a lousy job and they ought to be replaced. Less negative perceivers have a consistently lower participation rate.

Articulation of complaints to water officials follows the same pattern. The principal distinction is those with

Table 6-5

COMMUNITIES: WATER OFFICIALS ARE DOING A LOUSY JOB
 vs.
 PARTICIPATION IN WATER MATTERS
 (In Percentages)

Do You Participate In
 Local Water Matters?

		Yes	No	Totals
Happy Valley	Agree	14	86	100(21)
	Ambivalent	10	90	100(59)
	Disagree	12	88	100(34)
Stone's Throw	Agree	6	94	100(36)
	Ambivalent	3	97	100(35)
	Disagree	23	77	100(22)
Rambler	Agree	19	81	100(31)
	Ambivalent	14	86	100(49)
	Disagree	6	94	100(16)
Aspiration	Agree	30	70	100(50)
	Ambivalent	15	85	100(84)
	Disagree	0	100	100(21)
Euphoria	Agree	11	89	100(82)
	Ambivalent	3	97	100(115)
	Disagree	4	96	100(92)

less negative perceptions. They do not engage in complaining as much as the more hostile group. Differences between the polar groups are never less than twenty per cent.

When this is applied to the network of peers, neighbors and friends, differing patterns emerge among the communities (Table 6-7). Those perceiving a lousy job being done by water officials in Happy Valley are not as likely to discuss complaints with friends and neighbors. However, the proportion of those who are in this group is about the same as those who complain to officials (see Table 6-6). In Stone's Throw, where community identifications and access to water management is high, the perception item fails to discriminate among complainants and non-complainants. Residents of the three other communities with negative images do contribute more to the peer net. With the exception of Euphoria, the relationship is direct--the more intensely hostile, the higher volume of complaints. In Euphoria, there is a higher proportion of the highly negative who complain than the less negative although a lower proportion of ambivalents complain than either of the two other groups.

This brief look at participation shows a consistency similar to the perceptions. The level of consistency between negative perceptions and high participation is higher when the officials are involved in the process. There is a strong relationship between peer interactions, but it is not

Table 6-6

COMMUNITIES: WATER OFFICIALS ARE DOING A LOUSY JOB
 vs.
 COMPLAINT TO WATER OFFICIALS (GENERAL COMPLAINT)
 (In Percentages)

Communities	Complaint Made to Water Officials:		Total
	Comp. Once Or More	No Comp.	
Happy Valley	No Data Available		
Stone's Throw			
Agree	38	62	100(37)
Ambivalent	23	77	100(35)
Disagree	18	82	100(22)
Rambler			
Agree	52	48	100(31)
Ambivalent	40	60	100(50)
Disagree	31	69	100(16)
Aspiration			
Agree	39	61	100(62)
Ambivalent	28	72	100(88)
Disagree	9	91	100(22)
Euphoria			
Agree	65	35	100(49)
Ambivalent	22	78	100(54)
Disagree	12	88	100(66)

Table 6-7

COMMUNITIES: WATER OFFICIALS ARE DOING A LOUSY JOB

vs.

DISCUSSION WITH NEIGHBORS AND FRIENDS

(In Percentages)

Do You Discuss Complaints With
Neighbors and Friends?

Communities	Yes	No	Total
Happy Valley			
Agree	36	64	100(22)
Ambivalent	51	49	100(59)
Disagree	56	44	100(34)
Stone's Throw			
Agree	59	41	100(37)
Ambivalent	57	43	100(35)
Disagree	59	41	100(22)
Rambler			
Agree	74	26	100(31)
Ambivalent	72	28	100(50)
Disagree	56	44	100(16)
Aspiration			
Agree	84	16	100(62)
Ambivalent	72	28	100(88)
Disagree	55	45	100(22)
Euphoria			
Agree	80	20	100(50)
Ambivalent	65	35	100(57)
Disagree	71	29	100(17)

as consistent across the communities as those between user and water official. The data suggest that not only the perception of the officials is a variable in user behavior but that the system of communications by which these images are transmitted is itself a determinant of attitudes and behavior. Additional tables are included without comment to illustrate various aspects of the problem of the agency's image.

Table 6-8

COMMUNITIES:WATER OFFICIALS ARE DOING A LOUSY JOB
 vs.
 LENGTH OF RESIDENCE
 (In Percentages)

Communities	0-18 Months	18 Months- 3 Years	3-7 Years	7-15 Years	15 or more Years	Totals
Happy Valley						
Agree	23	9	18	23	27	100(22)
Ambivalent	25	14	25	14	22	100(59)
Disagree	26	21	12	9	32	100(34)
Stone's Throw						
Agree	21	11	18	47	3	100(38)
Ambivalent	29	17	29	26	0	101(35)
Disagree	14	18	27	41	0	100(22)
Rambler						
Agree	13	27	43	17	0	100(30)
Ambivalent	33	18	37	10	2	100(49)
Disagree	19	19	50	13	0	101(16)
Aspiration						
Agree	19	18	58	5	0	100(62)
Ambivalent	24	29	46	1	0	100(87)
Disagree	27	23	50	0	0	100(22)
Euphoria						
Agree	22	20	24	23	11	100(79)
Ambivalent	25	14	29	23	9	100(115)
Disagree	33	14	25	18	10	100(91)

Table 6-9

COMMUNITIES:WATER OFFICIALS ARE DOING A LOUSY JOB
 vs.
 OCCUPATION
 (In Percentages)

Communities	Upper Middle	Middle	Blue Collar	Farmer	Totals
Happy Valley					
Agree	22	31	47	0	100(36)
Ambivalent	26	40	34	0	100(35)
Disagree	23	32	41	5	101(22)
Stone's Throw					
Agree	33	14	38	14	99(21)
Ambivalent	38	23	23	17	101(53)
Disagree	47	28	13	13	101(32)
Rambler					
Agree	16	56	29	0	101(32)
Ambivalent	28	52	20	0	100(50)
Disagree	25	56	19	0	100(16)
Aspiration					
Agree	31	56	13	0	100(62)
Ambivalent	31	61	8	0	100(88)
Disagree	36	45	14	5	100(22)
Euphoria					
Agree	46	39	15	0	100(74)
Ambivalent	57	32	11	1	101(104)
Disagree	50	33	13	4	100(84)

Table 6-10

COMMUNITIES: WATER OFFICIALS ARE DOING A LOUSY JOB
 vs.
 EDUCATION
 (In Percentages)

Communities	Below High School	High School Graduate	College Dropout .	College Graduate	Totals
Happy Valley					
Agree	23	45	23	3	100(37)
Ambivalent	20	46	19	15	100(59)
Disagree	21	35	15	29	100(34)
Stone's Throw					
Agree	38	43	16	3	100(37)
Ambivalent	43	34	17	6	100(35)
Disagree	27	41	32	0	100(22)
Rambler					
Agree	19	48	32	0	99(31)
Ambivalent	22	56	14	8	100(50)
Disagree	19	44	13	25	101(16)
Aspiration					
Agree	18	61	11	10	100(62)
Ambivalent	18	49	12	20	99(88)
Disagree	18	45	23	14	100(22)
Euphoria					
Agree	17	35	29	18	99(82)
Ambivalent	12	33	22	33	100(116)
Disagree	17	40	8	35	100(93)

Table 6-11

COMMUNITIES: WATER OFFICIALS ARE DOING A LOUSY JOB
 vs.
 INCOME
 (In Percentages)

Communities	Under 2,500	2,500- 7,500	7,500- 15,000	15,000- 25,000	25,000 And Up	Totals
Happy Valley						
No Data Available						
Stone's Throw						
Agree	0	47	50	3	0	100(36)
Ambivalent	9	37	54	0	0	100(35)
Disagree	0	35	65	0	0	100(20)
Rambler						
Agree	4	25	68	4	0	101(28)
Ambivalent	2	37	58	2	0	99(48)
Disagree	0	31	69	0	0	100(16)
Aspiration						
Agree	2	30	61	6	2	101(61)
Ambivalent	0	34	62	2	1	99(87)
Disagree	0	25	75	0	0	100(20)
Euphoria						
Agree	5	20	66	8	1	100(76)
Ambivalent	5	21	55	15	3	99(109)
Disagree	1	32	50	16	1	100(88)

Table 6-12

COMMUNITIES:WATER OFFICIALS ARE DOING A LOUSY JOB
 vs.
 MANAGEMENT INPUT INDEX
 (In Percentages)

		Low	Medium	High	Totals
Happy Valley		No Data Available			
Stone's Throw	Agree	60	30	11	101(37)
	Ambivalent	71	20	9	100(35)
	Disagree	77	14	10	101(22)
Rambler	Agree	45	52	4	101(29)
	Ambivalent	58	38	4	100(50)
	Disagree	85	16	0	101(13)
Aspiration	Agree	60	33	8	101(62)
	Ambivalent	73	24	2	99(88)
	Disagree	91	5	5	101(22)
Euphoria	Agree	67	27	6	100(83)
	Ambivalent	86	14	1	101(117)
	Disagree	91	6	2	99(94)

Table 6-13

COMMUNITIES: WATER OFFICIALS ARE DOING A LOUSY JOB
 vs.
 MANAGEMENT OUTPUT INDEX
 (In Percentages)

		Low		High		Totals
Happy Valley	No Data Available					
Stone's Throw	Agree	19	19	62	0	100(37)
	Ambivalent	6	20	46	29	101(35)
	Disagree	0	5	18	77	100(22)
Rambler	Agree	61	16	23	0	100(31)
	Ambivalent	16	32	26	26	100(50)
	Disagree	0	13	6	81	100(16)
Aspiration	Agree	53	29	18	0	100(62)
	Ambivalent	35	28	17	19	99(88)
	Disagree	0	36	27	36	99(22)
Euphoria	Agree	35	29	36	0	100(83)
	Ambivalent	7	15	36	42	100(117)
	Disagree	0	8	30	63	101(94)

Table 6-14

COMMUNITIES: WATER OFFICIALS ARE DOING A LOUSY JOB
 vs.
 FREQUENCY OF DISCUSSION OF WATER COMPLAINTS
 (In Percentages)

Communities	Have You Discussed Water Complaints?		Total
	Yes	No	
Happy Valley			
Agree	73	27	100(22)
Ambivalent	61	39	100(59)
Disagree	56	44	100(34)
Stone's Throw			
Agree	76	24	100(37)
Ambivalent	74	36	100(35)
Disagree	64	36	100(22)
Rambler			
Agree	94	6	100(31)
Ambivalent	80	20	100(50)
Disagree	56	44	100(16)
Aspiration			
Agree	89	11	100(62)
Ambivalent	82	18	100(88)
Disagree	55	45	100(22)
Euphoria			
Agree	79	21	100(76)
Ambivalent	61	39	100(94)
Disagree	22	78	100(78)

Table 6-15

COMMUNITIES: WATER OFFICIALS ARE DOING A LOUSY JOB
 vs.
 WHAT APPLIES TO WATER OFFICIALS
 (In Percentages)

Communities	They do what:			Total
	Citizens Want	Influentials Want	They Want	
Happy Valley				
Agree	24	29	48	100(21)
Ambivalent	49	21	30	100(57)
Disagree	51	19	29	99(31)
Stone's Throw				
Agree	19	35	46	100(37)
Ambivalent	31	26	43	100(35)
Disagree	43	29	29	101(21)
Rambler				
Agree	10	50	40	100(30)
Ambivalent	30	40	30	100(47)
Disagree	44	31	25	100(16)
Aspiration				
Agree	20	31	49	100(61)
Ambivalent	31	31	37	99(83)
Disagree	61	14	24	99(21)
Euphoria				
Agree	12	43	44	99(81)
Ambivalent	31	29	41	101(111)
Disagree	74	15	11	100(82)

Table 6-16

COMMUNITIES:WATER OFFICIALS ARE DOING A LOUSY JOB
 vs.
 WATER OFFICIALS REACTION TO REQUEST
 (In Percentages)

Communities	Do What Could	Listen but Avoid	Ignore Request	Total
Happy Valley				
Agree	50	45	5	100(22)
Ambivalent	70	28	2	100(53)
Disagree	85	15	0	100(34)
Stone's Throw				
Agree	46	46	8	100(37)
Ambivalent	57	26	17	100(35)
Disagree	67	29	5	101(35)
Rambler				
Agree	16	52	32	100(31)
Ambivalent	44	42	15	101(48)
Disagree	63	31	6	100(16)
Aspiration				
Agree	24	50	26	100(62)
Ambivalent	37	49	14	100(81)
Disagree	76	10	14	100(21)
Euphoria				
Agree	18	41	41	100(78)
Ambivalent	52	32	16	100(106)
Disagree	85	12	2	99(81)

Chapter VII

MANAGEMENT INPUT FROM THE PUBLIC SYSTEM

Results emerging from simple bivariate tests in Chapter V stimulated us to probe the communications realm more deeply. There the data tests indicated rather strongly that water managers and policymakers were hearing primarily from resistors and those persons in their relevant publics whose orientations tended to restrict policy alternatives. To state it another way, outside of one community, Euphoria, the bulk of information contributed by the public to the management net was restrictive, at least toward financial options. Supportive and facilitative input from the public system was feeble by comparison. This could be crucial for policymaking activities as well as for the character of the policy itself.

There are further reasons, however, for probing the communications continuum more fully. Research in cybernetics has already demonstrated that communication nets, (those which are conceptualized as systems of behavior encompassing input, responses, and feedback within an environment), provide an excellent vehicle for social measurement that will give higher yields than many other instruments now employed in social measurement.¹ A decisional system itself

¹See W. Ashby, An Introduction to Cybernetics, New York: John Wiley, 1961; see also Karl Deutsch, The Nerves of Government, New York: Free Press, 1963, and Richard Fagen, Politics and Communication, Boston: Little, Brown, 1966.

can be conceptualized as a communications net and the system itself can be mapped. Plottings on the map will show the information flow. The map, when detailed, would "highlight the actual channels of communication," says Richard Snyder.² We can then begin linking in and characterizing message content and the sources of messages as well as the character of the feedback and its routes and channels. Static, noise and stoppages can be identified and linked to the other elements in the system.³ If such a procedure is pursued rigorously and systematically it should yield viable classification systems which have high utility in test designs.

The Management Input Index

Having formulated an hypothesis in Chapter 5 about the type of information the public system contributes to the management information net, namely that it is restrictive, we decided to carry our analysis a step further. In so doing, we developed a measure which included as much of the information or communication as possible that was flowing from the public system to the management and policymaking system. The instrument that we developed was an index of

²See Richard Snyder, et al., Foreign Policy Decision-Making, New York: Free Press, 1962, pp. 124-137; see also Karl Deutsch, "On Communications Models in the Social Sciences," Paper delivered at the Conference on Model Construction in the Social Sciences, Princeton, New Jersey, March, 1952.

³ Ibid.

management input. It included five of the dimensions we probed with our questionnaire at four of the research sites. The items and the indexing procedure are portrayed in Figure 4. Admittedly, indexes are rough or crude indicators. But given the condition of social theory and the steps one must take to cope with it, we are obliged to move slowly from rough measures to the more sophisticated ones (see Chapter 2). Nowhere is this more apparent than in a consideration of what may be in the management communications net (its total composition and content), namely, what it includes in addition to the public inputs. Indeed, management itself often supplies a large volume of communication or information to its own net as do people and groups other than the system's relevant, affected, or target publics. In fact, in some instances it is possible to imagine a policymaking group to be operating almost exclusively on its own information input. The psychological system has wondrous mechanisms for screening, selecting out, hearing what it wants to hear, and indulging in selective inattention. Policymakers might screen out inputs from the public almost entirely.

The point is just this. As variables in the system grow in numbers, we are obliged to bear the costs and increase the effort. As we pointed out in Chapter 2, our assumptions, models, and designs must be kept in a simplified condition. Again, highly refined techniques applied to gross data often

Figure 4

MANAGEMENT INPUT INDEX

<u>Item Content</u>	<u>Respondent Choices</u>	<u>Numerical Value</u>		
Have you discussed your complaints about water conditions, decisions, low pressure, high rates, services, etc., with any of the following groups?	To water officials connected with city government	Yes No	1 point + 0 points -	Totals 0 points low 1 point 2 points 3 points 4 points 5 points high
	To water officials not connected with city government	Yes No	1 point + 0 points -	
	To other local officials	Yes No	1 point + 0 points -	
If you have complained to officials in this area about water would you say that you have complained:	NA	0 points -		
	Very often	1 point +		
	Frequently	1 point +		
	Seldom or very little	1 point +		
	Not at all	0 points -		
To what extent would you say you discuss water problems outside your family with water officials?	NA	0 points -		
	Great deal	1 point +		
	Some	1 point +		
	Very little	1 point +		
	None	0 points -		

leads to spurious conclusions and contributes to the growing volume of suspect information (even if artfully stated), upon which no practitioner in the real world dares to rely.

Before moving to the first of our tests, several key observations are in order. One is that we are not measuring actual volume of inputs into the system. Rather, we are specifying the actors' perceived inputs and the volume they report those inputs to have. This is a crucial theoretical distinction. Many persons may perceive their input volumes as being much higher than they actually are, and others may perceive a much lower input than they are communicating. Our tentative premise is based on prior research which shows that the perceived volume of input often provides a better, or at least as good, index of how a person will act as does the actual input. The theoretical foundation for this premise dates back at least as far as Machiavelli and his observations on the roles of phantasy and illusion in political and social systems.⁴ In a very clear, if crude, fashion Machiavelli constructed a testable hypothesis, namely, that the probability is high that persons respond to the world about them in terms of the way they see the world, irrespective of the way others see it

⁴N. Machiavelli, The History of Florence, Chapter II; and his The Discourses in the First Ten Books of Titus Livius, Chaps. II and III.

or say it actually is in fact.⁵ If a person perceives a house to be haunted, he is likely to respond as if it were. If a person perceives district water rates to be excessively high or the management to be incompetent, he will have a high probability of responding in terms of the perceptions, not necessarily the way others see them. Something could happen to change his mind, of course, but this rest on probabilities too and is a testable hypothesis in itself. It also introduces a preconception and premise that most men are "rational," will see "the light," or perceive the outside world as the "rational model" builder sees it.

Empirical tests have validated the Machiavellian hypothesis. Kurt Lewin's experiments with school children at the University of Iowa⁶ during the 1930's, for example, developed a theoretical base that proved useful to measurement and

⁵Machiavelli himself put little stock or credence in the value of systematic empirical measurement. To him human behavior was too erratic, irregular, and chaotic to permit clear and precise analysis and measurement. He favored, rather, a type of "barefoot historical empiricism" that would, he thought, provide a basis for "prudent calculation." Therefore, the hypothesis he poses was for him a proposition that would not have been tested systematically. See N. Machiavelli, The Discourses on the First Ten Books of Titus Livius, Chap. I; and Machiavelli's The Prince, Chap. XXI.

⁶K. Lewin, et al., "Patterns of Aggressive Behavior in Experimentally Created 'Social Climates'," Journal of Social Psychology, Vol. 10, 1939, pp. 271-299; his "Frontiers in Group Dynamics," and "Constructs in Field Theory," in D. Cartwright (ed.), Field Theory in Social Science, New York: Harper, 1951; and his "Field Theory and Experiment in Social Psychology: Concepts and Methods," American Journal of Sociology, Vol. 44, November, 1939.

prediction in the voting studies⁷ conducted at the University of Michigan's Survey Research Center.⁸ Researchers at the SRC have plotted and verified perceptual fields which can be classified and in which various congeries of perceptions can be linked and the linkages classified. For testing purposes, things are "real" if they are perceived as real.

Groups are real because they are psychologically real, and thereby affect the way in which we behave. If we hear that "the labor union" is advocating a piece of legislation, we rarely think of many individuals, characterized by certain occupations, who advocate the measure. Rather, we are likely to think of the labor union as a single entity or unit. Now and then we may think primarily of the union leadership as the agent, or even certain specific leaders. But we still tend to regard these individuals as spokesmen for the group. And this psychological shorthand has effects on our opinions and behavior. If we know that "the union" makes a political endorsement, we may well react positively or negatively to the candidate or issue, according to whether our sympathies lie with or against the union. The "kiss of death" of an unpopular group endorsement describes precisely this phenomenon.

Groups have influence, then because we tend to think of them as wholes, and come to respond positively or negatively to them in that form. In this sense, even people who are not members of a group may be influenced by the position that a group takes in politics.⁹

⁷The term "voting study" is easily misconstrued. It goes far beyond the mere quantification of voting orientations, directions, other voting variables and their linkages to other behavior. Research and resultant theory have now penetrated a large sector of general political behavior in which voting variables become somewhat incidental in the total picture. See. Angus Campbell, et al., The American Voter, New York: John Wiley, 1960; and this team's recent publication, The Political Order, New York: John Wiley, 1965.

⁸Both studies cited above in Note No. 7 are reports of the continuing research at this center.

⁹A. Campbell, et al., The American Voter, op. cit., p. 296.

If the elements within and between the perceptual fields can be plotted as they link to one another, then we have a foothold for relating them to the perceptual fields of administration and other congeries of political behavior. Again, management's response will likely follow the volume and type of input that policymakers and administrators perceive rather than the volume that might be measured by some potential metering device. This avoids the pitfalls of the rational models (e.g., the economists' benefit-cost model) which constitute the investigator's perceptions of benefit-cost, not necessarily the actor's. It poses no threat to the continued utility of rational models, however. Quite the opposite, it will supplement and inform rational models about the location and intensity of perceptions.

Just two more observations before launching into the analysis. First, questionnaires administered in Happy Valley, the first community we investigated, did not contain all of the items included in the management input index for the other research sites. Consequently, any index for Happy Valley would not be comparable, and results unfortunately must be deleted. Second, very few people at any site reported an exceptionally high communications input by our index. People just don't have that much contact with their water policy-makers and administrators. Therefore, the "high" input distributions have small "N's" and should be treated

carefully. The difference between "low" and "medium" categories do, however, contain significantly different levels of volume. The data is therefore useful for our purposes.

Socio-Economic Dimensions

Moving now directly to tests of the data, Table 7-1 indicates that it is definitely the middle and high income categories that are contributing the bulk of input to the management net with the slight exception in Euphoria, the low income persons cluster in the "low" input cells. As one moves from low to high volume of input, the low and middle income categories drop while the high income classifications rise. Considering the high incidence of middle income people, they are contributing heavily to the net despite the drop as volume rises. The weight of middle income inputs becomes more salient when one considers the variation between low and medium input, excluding the "high" input categories which have such a small "N".

Table 7-2 reveals that it is also the higher educational statuses that are contributing most to the net, especially the high school graduate and the college dropout. The occupation dimensions, however, show a much more irregular and weak pattern than that found in either the table on income or the one on education. Yet, there is an overall indication that is consistent with the effects of status

Table 7-1

MANAGEMENT INPUT vs. INCOME
(In Percentages)

<u>Communities</u>	<u>Low</u>	<u>Medium</u>	<u>High</u>	<u>Total</u>
Happy Valley				
No Data Available				
Stone's Throw				
Low	18	68	14	100(71)
Medium	12	71	17	100(24)
High	0	70	30	100(10)
Rambler				
Low	11	63	26	100(62)
Medium	5	62	33	100(42)
High	0	40	60	100(5)
Aspiration				
Low	4	71	25	100(139)
Medium	2	57	40	99(47)
High	0	38	63	101(8)
Euphoria				
Low	16	41	44	101(301)
Medium	4	36	60	100(45)
High	14	0	86	100(7)

Table 7-2

MANAGEMENT INPUT vs. EDUCATION
(In Percentages)

<u>Communities</u>	<u>Below High School</u>	<u>High School Graduate</u>	<u>College Dropout</u>	<u>College Graduate</u>	<u>Total</u>
Happy Valley	No Data Available				
Stone's Throw					
Low	43	41	12	4	100(76)
Medium	25	42	29	4	100(24)
High	18	36	45	0	99(11)
Rambler					
Low	28	48	13	10	99(67)
Medium	16	61	16	7	100(44)
High	0	33	67	0	100(6)
Aspiration					
Low	22	49	14	15	100(14)
Medium	13	55	17	15	100(47)
High	0	63	0	37	100(8)
Euphoria					
Low	16	40	17	27	100(328)
Medium	16	39	18	27	100(49)
High	13	0	50	38	101(8)

Table 7-3MANAGEMENT INPUT vs. OCCUPATION
(In Percentages)

Communities	Upper Middle	Middle	Blue Collar	Farmer	Total
Happy Valley	No Data Available				
Stone's Throw					
Low	20	36	43	1	100(76)
Medium	29	29	42	0	100(24)
High	40	30	30	0	100(10)
Rambler					
Low	19	66	15	0	100(62)
Medium	20	48	32	0	100(44)
High	33	50	17	0	100(6)
Aspiration					
Low	31	57	10	1	99(142)
Medium	29	59	12	0	100(49)
High	13	75	13	0	101(8)
Euphoria					
Low	52	30	17	1	100(315)
Medium	53	18	24	6	101(47)
High	50	50	0	0	100(9)

Table 7-4

MANAGEMENT INPUT vs. POLITICAL PARTY
(In Percentages)

Communities	Republican	Democrat	Other	Total
Happy Valley				
No Data Available				
Stone's Throw				
Low	26	67	7	100(70)
Medium	29	62	8	99(24)
High	10	80	10	100(10)
Rambler				
Low	33	43	24	99(60)
Medium	29	59	12	100(41)
High	50	33	17	100(6)
Aspiration				
Low	36	58	7	101(137)
Medium	48	46	7	101(46)
High	75	25	0	100(8)
Euphoria				
Low	53	32	16	101(297)
Medium	64	20	16	100(44)
High	88	0	13	101(8)

noted in previous tables. Upper middle and middle occupations tend to contribute to management and policymaking input somewhat more heavily across all communities than do the lower occupation statuses. Yet, the inputs vary considerably in terms of community types. Rambler and Stone's Throw, for example, show a sturdier contribution from the blue collar categories than the other two communities. This could be expected since both communities contain a large proportion of lower middle status persons. Yet, despite this, the amount of input from the "blue collar" category is not exceedingly heavy, a fact that supports our hypothesis about the heavier inputs of the upper statuses (Table 7-3).

The table displaying distributions for political party identifications is most challenging. In all communities except Euphoria again, Democratic identifiers tend to be heavy contributors to the management and policymaking net, that is, when one trains his attention on the medium input category. In Euphoria and Aspiration, both being Republican communities, the Republican contribution is high; but Aspiration Republicans only barely overcome the Democratic identifiers. No doubt, efforts to break out the medium and low input categories and analyze distributions in terms of intensity of identification across both major parties would be highly informative. This will be one of the high priority items for testing in the immediate future (Table 7-4).

Possibly we should pause for a moment to note the continued emergence of sharp variations and even "turn-arounds" in the data according to the type of community. In some instances the type of community seems to intervene and affect the classificatory capabilities of the socio-economic variables (some tables in all chapters seem to indicate this). Possibly, socio-economic variables by themselves are not as viable as classificatory determinants as is so frequently assumed. Life styles, patterns of residence, ways of communicating, and ideological conformations appear to be crucial determinants that affect the power of socio-economic variables to explain social life. Hence, our findings oblige us to give them a high priority in future tests.

Output Dimensions

Let us proceed directly to the central questions raised in Chapter 5 which prompted the considerations in this chapter. Earlier, we noted that the persons with restrictive policy orientations were putting a disproportionate amount of information into the management and policymaking net by comparison with the supportive and facilitative types of people. In Chapter 6 another test revealed that people who thought their agency was doing a good job had lower input than those who thought their agency was doing a "lousy" job. The first test here involves an index of management output which indexes three probes of negative-

positive perceptions of agency management and policy-makers. Items are indexed in a manner similar to the procedure used for the management input index displayed in Figure 4. Negative perceptions are conceptualized as "high" output and positive ones as "low" output. Table 7-5 shows that as negative perceptions (output) build, input into the agency net rises. Distributions show a pronounced trend. In fact, the relationships between the two variables are statistically significant in all communities. Euphoria shows somewhat of a variant pattern again if one discounts the high input categories and trains his attention on the low and medium categories only. Again, our hypothesis holds. The more negative and restrictive types of persons have the disproportionate amounts of input. Conversely, the agency is being deprived of a proportionate opportunity to hear from its sources of support. Of course, agency personnel are always in a position to provide their own supportive information.

Table 7-6 is most revealing indeed. The table displays distributions between management input and policy-making output. The policymaking output variable is the product of a standard index of three probes of the policy-making process. "High" output indicates negative perceptions of the process, "low" indicates positive perceptions. In all communities except Stone's Throw, those with negative and restrictive perceptions are coming into

Table 7-5

COMMUNITIES: MANAGEMENT INPUT
vs.
MANAGEMENT OUTPUT INDEX
(In Percentages)

<u>Communities</u>	<u>High Output</u>	<u>Low Output</u>	<u>Totals</u>
Happy Valley	No Data Available		
Stone's Throw			
Low	21	79	100(76)
Medium	46	54	100(24)
High	55	46	101(11)
Rambler			
Low	39	61	100(67)
Medium	80	21	101(44)
High	100	0	100(6)
Aspiration			
Low	58	42	100(144)
Medium	84	16	100(49)
High	100	0	100(8)
Euphoria			
Low	34	66	100(332)
Medium	28	72	100(39)
High	75	25	100(8)

Table 7-6

COMMUNITIES: MANAGEMENT INPUT
vs.
POLICYMAKING OUTPUT
(In Percentages)

<u>Communities</u>	<u>High</u>	<u>Low</u>	<u>Totals</u>
Happy Valley	No Data Available		
Stone's Throw			
Low	38	62	100(76)
Medium	42	58	100(24)
High	73	27	100(11)
Rambler			
Low	54	46	100(67)
Medium	64	36	100(44)
High	67	33	100(6)
Aspiration			
Low	66	34	100(144)
Medium	82	18	100(49)
High	75	25	100(8)
Euphoria			
Low	43	57	100(332)
Medium	62	38	100(50)
High	75	25	100(8)

the management and policy-making net loud and clear. Even in Stone's Throw the medium category of input contains 42% of persons with high policymaking output. Where the volume of input is exceptionally high, all communities have a high contribution from their restrictive clientele. Again our hypothesis is being validated.

Finally, Table 7-7 reflects directly on the compounded theoretical difficulties in social analysis. We asked people if they had complaints they never divulged, irrespective of those they may or may not have uttered openly. In short, do they withhold information? Those who said ^{withhold information} they did/show a strong tendency to load a disproportionate amount of information into the management net by comparison to those who do not harbor information. The way this could distort management and policymaker perceptions of their publics and their needs should be obvious. But it also expands the number of variables which we, as investigators, must include within the system. Yet, so far as we can ascertain at this time on the basis of other tests, this finding does not disturb our hypothesis about disproportionate loadings into the management net by persons with negative perceptions. They are loading them in, but they are not contributing all of them.

Political Participation

Do the political participants, those people who make a difference in the political realm, have the highest or lowest

Table 7-7

COMMUNITIES: MANAGEMENT INPUT
 vs.
 WHETHER YOU HAVE COMPLAINED TO ANYONE ABOUT WATER SERVICE
 OR NOT, DO YOU FEEL THAT YOU HAVE COMPLAINTS
 THAT YOU HAVE SAID MUCH ABOUT?
 (In Percentages)

<u>Communities</u>	<u>Harbor Complaints</u>	<u>Do Not Harbor</u>	<u>Totals</u>
Happy Valley	No Data Available		
Stone's Throw			
Low	80	20	100(76)
Medium	75	25	100(24)
Low	91	9	100(11)
Rambler			
Low	54	46	100(67)
Medium	73	27	100(44)
High	50	50	100(6)
Aspiration			
Low	60	40	100(144)
Medium	84	16	100(49)
High	38	63	101(8)
Euphoria			
Low	40	60	100(315)
Medium	76	24	100(45)
High	100	0	100(5)

management input? Let us investigate first those persons who become directly involved in political and government issues. As expected, their numbers are small, but Table 7-8 shows that their proportion of input into the management net increases regularly in all communities as one moves from the "low" input category to the "high." Table 7-9 shows the same phenomenon. Persons who report that they are consulted by their peers more than other individuals about political issues, opinions, and policies have a decidedly strong tendency to load a disproportionate volume of information into the management net.

Now let us try some indexes of general overall political participation and interaction, each of which indexes several single unidimensional probes. The first, a general political participation index (see Table 7-10) displays statistically a significant trend. As input volume increases, the higher the proportion of political participants (as apposed to non-participants) who are involved in the process of loading information into the management net. Exactly the same results (although slightly more faint) emerge from the Interaction Index. The higher the volume, the higher the input by those engaging increasingly in political interaction (see Table 7-11). Finally, the trend is even more significant in Table 7-12 which shows that persons interested in water matters (as apposed to those who are not interested),

Table 7-8

COMMUNITIES: MANAGEMENT INPUT
vs.
ACTIVE PART IN LOCAL GOVERNMENT ISSUES

Communities	Yes	No	Total
Happy Valley	No Data Available		
Stone's Throw			
Low	12	88	100(74)
Medium	17	83	100(24)
High	55	45	100(11)
Rambler			
Low	14	86	100(66)
Medium	23	77	100(43)
High	33	67	100(6)
Aspiration			
Low	9	91	100(138)
Medium	29	71	100(49)
High	38	63	101(8)
Euphoria			
Low	10	90	100(322)
Medium	13	87	100(47)
High	50	50	100(8)

VII-23

Table 7-9

COMMUNITIES: MANAGEMENT INPUT
 vs.
 DEGREE TO WHICH RESPONDENT IS CONSULTED BY PEERS ABOUT POLITICS,
 BY COMPARISON TO WHICH HIS NEIGHBORS AND FRIENDS ARE CONSULTED.

Communities	More	Less	Same	Don't Know	Totals
Happy Valley	No Data Available				
Stone's Throw					
Low	15	37	22	26	100(76)
Medium	33	29	12	25	99(24)
High	55	18	9	18	100(11)
Rambler					
Low	15	39	21	24	99(66)
Medium	19	24	33	24	100(42)
High	50	33	17	0	100(5)
Aspiration					
Low	16	26	26	32	100(143)
Medium	27	10	40	23	100(48)
High	50	25	13	13	101(8)
Euphoria					
Low	18	23	36	23	100(318)
Medium	22	20	47	10	99(49)
High	50	13	38	0	101(8)

Table 7-10

COMMUNITIES: MANAGEMENT INPUT
vs.
POLITICAL PARTICIPATION

<u>Communities</u>	<u>Low Participation</u>	<u>High Participation</u>	<u>Totals</u>
Happy Valley	No Data Available		
Stone's Throw			
Low	85	15	100(66)
Medium	70	30	100(20)
High	36	64	100(11)
Rambler			
Low	83	17	100(52)
Medium	72	28	100(39)
High	17	83	100(6)
Aspiration			
Low	84	16	100(118)
Medium	51	49	100(45)
High	63	38	101(8)
Euphoria			
Low	84	16	100(268)
Medium	78	22	100(45)
High	38	63	101(8)

Table 7-11

COMMUNITIES: MANAGEMENT INPUT
vs.
INTERACTION INDEX
(In Percentages)

<u>Communities</u>	<u>Low</u>	<u>Medium</u>	<u>High</u>	<u>Totals</u>
Happy Valley	No Data Available			
Stone's Throw				
Low	23	55	22	100(74)
Medium	29	50	21	100(24)
High	9	45	45	99(11)
Rambler				
Low	38	52	11	101(56)
Medium	33	31	36	100(42)
High	0	17	83	100(6)
Aspiration				
Low	33	47	20	100(132)
Medium	23	37	40	100(43)
High	13	50	38	101(8)
Euphoria				
Low	31	41	28	100(332)
Medium	24	22	54	100(50)
High	13	0	88	101(8)

Table 7-12

COMMUNITIES: MANAGEMENT INPUT
vs.
INTEREST IN LOCAL WATER MATTERS AND AFFAIRS

<u>Communities</u>	<u>High Interest</u>	<u>Low Interest</u>	<u>Totals</u>
Happy Valley	No Data Available		
Stone's Throw			
Low	76	24	100(76)
Medium	88	12	100(24)
High	100	0	100(11)
Rambler			
Low	69	31	100(65)
Medium	91	9	100(44)
High	100	0	100(6)
Aspiration			
Low	85	15	100(140)
Medium	98	2	100(49)
High	100	0	100(8)
Euphoria			
Low	43	57	100(321)
Medium	75	25	100(48)
High	100	0	100(8)

are big contributors to the management net as are the voters in general elections (Table 7-13), persons who complain to their peers (Table 7-14), members (as apposed to non-members) of community organizations, (Table 7-15), persons who declare that they have high interest in political campaigns (Table 7-16), and people with high information input into the peer net or "friends and neighbors" communications circuit (Table 7-17). This should be a sufficient demonstration that the management net is fed at a disproportionately high rate by persons who are political activists. We can now conclude that there is a highly tenable hypothesis to the effect that the real feeder of the management net is a middle to high status political activist who has negative perceptions of the system and restrictive policy orientations which limit the options of policymakers.

Associated Attitudes and Orientations

What sorts of attitudes and orientations (other than financial) characterize this type of person who feeds the management net so heavily and restricts policy options? We will just point out a few of the more salient at this time. First, outside of Stone's Throw where lower status people abound and water issues are less salient, the big contributor to the management net thinks water decisions are unfair and inequitable (Table 7-18). He shows a high faith in the capacity of ordinary members of the public to make decisions (Table 7-19). And, he gives a lot of thought to water problems, or, at least, thinks he does. (Table 7-20).

Table 7-13

COMMUNITIES: MANAGEMENT INPUT
 vs.
 "DID YOU VOTE IN THE LAST PRESIDENTIAL ELECTION?"

<u>Communities</u>	<u>Yes</u>	<u>No</u>	<u>Totals</u>
Happy Valley			
	No Data Available		
Stone's Throw			
Low	72	28	100(76)
Medium	83	17	100(23)
High	82	18	100(11)
Rambler			
Low	67	33	100(67)
Medium	86	14	100(42)
High	100	0	100(6)
Aspiration			
Low	84	16	100(143)
Medium	79	21	100(47)
High	88	13	101(8)
Euphoria			
Low	78	22	100(324)
Medium	90	10	100(50)
High	100	0	100(8)

Table 7-14 -

COMMUNITIES: MANAGEMENT INPUT
vs.
COMPLAINED TO PERSONS OTHER THAN WATER OFFICIALS
(In Percentages)

Communities	Complained	Did Not Complain	Totals
Happy Valley	No Data Available		
Stone's Throw			
Low	30	70	100(76)
Medium	71	29	100(24)
High	91	9	100(11)
Rambler			
Low	24	76	100(67)
Medium	87	14	101(44)
High	83	17	100(6)
Aspiration			
Low	42	58	100(144)
Medium	90	10	100(49)
High	100	0	100(8)
Euphoria			
Low	26	74	100(3 28)
Medium	97	3	100(4 7)
High	100	0	100(7)

Table 7-15

COMMUNITIES. MANAGEMENT OUTPUT
 vs.
 MEMBERSHIP IN COMMUNITY ORGANIZATION

<u>Communities</u>	<u>Yes</u>	<u>No</u>	<u>Totals</u>
Happy Valley	No Data Available		
Stone's Throw			
Low	54	46	100(76)
Medium	83	17	100(24)
High	91	9	100(11)
Rambler			
Low	61	39	100(67)
Medium	68	32	100(44)
High	100	0	100(6)
Aspiration			
Low	77	23	100(144)
Medium	84	16	100(49)
High	88	13	101(8)
Euphoria			
Low	76	24	100(314)
Medium	92	8	100(49)
High	100	0	100(8)

Table 7-16

COMMUNITIES MANAGEMENT INPUT
vs.
DECLARED PERSONAL INTEREST IN POLITICAL CAMPAIGNS

<u>Communities</u>	<u>Very Interested</u>	<u>Some What Interested</u>	<u>Not Interested</u>	<u>Totals</u>
Happy Valley				
	No Data Available			
Stonés Throw				
Low	29	53	17	99(75)
Medium	46	42	12	100(24)
High	45	45	9	99(11)
Rambler				
Low	27	49	24	100(63)
Medium	43	40	18	101(40)
High	67	33	0	100(6)
Aspiration				
Low	26	46	28	100(48)
Medium	35	52	13	100(48)
High	43	14	43	100(7)
Euphoria				
Low	32	48	20	100(310)
Medium	38	47	15	100(47)
High	63	25	13	101(8)

Table 7-17

COMMUNITIES: MANAGEMENT INPUT
vs.
PEER INPUT

<u>Communities</u>	<u>Low Peer Input</u>	<u>High Peer Input</u>	<u>Totals</u>
Happy Valley	No Data Available		
Stone's Throw			
Low	58	42	100(76)
Medium	12	88	100(24)
High	0	100	100(11)
Rambler			
Low	45	55	100(67)
Medium	21	80	101(44)
High	0	100	100(6)
Aspiration			
Low	41	59	100(144)
Medium	14	86	100(49)
High	0	100	100(8)
Euphoria			
Low	58	43	101(332)
Medium	46	54	100(50)
High	38	63	101(8)

Table 7-18

COMMUNITIES: MANAGEMENT INPUT
 vs.
 WATER DECISIONS ARE FAIR AND EQUITABLE
 (In Percentages)

<u>Communities</u>	<u>Fair</u>	<u>Ambivalent</u>	<u>Unfair</u>	<u>Totals</u>
Happy Valley	No Data Available			
Stone's Throw				
Low	49	32	19	100(68)
Medium	39	35	26	100(23)
High	40	20	40	100(10)
Rambler				
Low	35	44	21	100(57)
Medium	16	46	39	101(44)
High	0	33	67	100(6)
Aspiration				
Low	20	42	38	100(128)
Medium	7	22	72	101(46)
High	0	38	63	101(8)
Euphoria				
Low	38	44	18	100(263)
Medium	21	28	51	100(47)
High	13	13	75	101(8)

Table 7-19

COMMUNITIES: MANAGEMENT INPUT
 vs.
 LEVEL OF FAITH IN PUBLIC TO MAKE DECISIONS
 (In Percentages)

Communities	High	Medium	Low	Totals
Happy Valley	No Data Available			
Stone's Throw				
Low	44	29	26	99(72)
Medium	33	29	37	99(24)
High	30	50	20	100(10)
Rambler				
Low	32	49	19	100(57)
Medium	37	40	23	100(43)
High	17	50	33	100(6)
Aspiration				
Low	42	32	27	101(132)
Medium	49	38	13	100(45)
High	38	38	25	101(8)
Euphoria				
Low	37	32	31	100(291)
Medium	39	30	32	101(44)
High	33	17	50	100(6)

Table 7-20

COMMUNITIES: MANAGEMENT INPUT
 vs.
 JUST DON'T HAVE TIME TO THINK ABOUT WATER PROBLEMS
 (In Percentages)

<u>Communities</u>	<u>Doesn't Think</u>	<u>Thinks Some</u>	<u>Thinks a Great Deal</u>	<u>Totals</u>
Happy Valley	No Data Available			
Stone's Throw				
Low	41	25	34	100(76)
Medium	12	17	71	101(24)
High	0	9	91	100(11)
Rambler				
Low	39	31	31	101(65)
Medium	23	30	47	100(43)
High	16	16	67	99(6)
Aspiration				
Low	35	26	39	100(143)
Medium	12	22	65	99(49)
High	0	13	88	101(8)
Euphoria				
Low	54	25	21	100(326)
Medium	25	31	44	100(48)
High	0	13	88	100(8)

Turning now to some sample attitudes toward water and its administration per se, we can see in Table 7-21 that as management and policymaking input rises, so does the proportion of persons who believe that there are workable alternatives to their present water administration. In a similar manner, a rise in management input is associated with an attitude that expertise and training are essential to modern water administration (see Table 7-22). A similar result is obtained for persons who think that water will not always be plentiful in the area (see Table 7-23).

On a more generalized attitudinal level we find that the heavy suppliers of input into the management communication circuits display a stronger sense of civic duty than the low suppliers of information. The sense of civic duty is measured by a Guttman scale that is sensitive to a person's commitment to fulfill his perceived civic and public obligations (see Table 7-24). Quite in line with this finding is the one emerging from the test of political cynicism. The political cynicism scale is a Guttman scale of several tested probes which were originally developed to determine the extent to which a person trusted his political leaders and officials. Table 7-25 indicates that persons with higher management input tend to be moderate to high in their trust.

Just as in the previous tests, the message we are getting from a study of persons with a high input into

Table 7-21

COMMUNITIES:MANAGEMENT INPUT
vs.
PERCEIVE WORKABLE ALTERNATIVES TO PRESENT ADMINISTRATION
(In Percentages)

Communities	Yes	No	Totals
Happy Valley	No Data Available		
Stone's Throw			
Low	59	41	100(68)
Medium	65	35	100(20)
High	91	9	100(11)
Rambler			
Low	57	43	100(54)
Medium	84	16	100(38)
High	100	0	100(6)
Aspiration			
Low	76	24	100(107)
Medium	96	5	101(44)
High	100	0	100(8)
Euphoria			
Low	61	39	100(200)
Medium	87	13	100(46)
High	100	0	100(8)

Table 7-22

COMMUNITIES: MANAGEMENT INPUT
vs.
LITTLE TRAINING AND EXPERTISE IS NEEDED IN WATER ADMINISTRATION
(In Percentages)

Communities	Yes	Ambivalent	No	Totals
Happy Valley				
	No Data Available			
Stone's Throw				
Low	11	26	63	100(73)
Medium	25	8	67	100(24)
High	27	18	64	99(11)
Rambler				
Low	23	20	57	100(60)
Medium	15	25	60	100(40)
High	17	50	33	100(6)
Aspiration				
Low	18	34	48	100(132)
Medium	30	16	55	101(44)
High	25	25	50	100(8)
Euphoria				
Low	48	38	14	100(310)
Medium	19	41	40	100(48)
High	0	13	88	101(8)

Table 7-23

COMMUNITIES: MANAGEMENT INPUT
 vs.
 PERCEPTION THAT WATER WILL ALWAYS BE PLENTIFUL IN AREA
 (In Percentages)

<u>Communities</u>	<u>High</u>	<u>Medium</u>	<u>Low</u>	<u>Totals</u>
Happy Valley	No Data Available			
Stone's Throw				
Low	25	25	50	100(52)
Medium	9	17	74	100(23)
High	0	20	80	100(10)
Rambler				
Low	20	28	52	100(60)
Medium	10	31	60	101(42)
High	0	60	40	100(5)
Aspiration				
Low	22	26	52	100(137)
Medium	11	26	64	101(47)
High	13	13	75	101(8)
Euphoria				
Low	32	22	47	101(301)
Medium	31	22	47	100(49)
High	25	25	50	100(8)

Table 7-24

COMMUNITIES: MANAGEMENT INPUT
vs.
SENSE OF CIVIC DUTY
(In Percentages)

<u>Communities</u>	<u>Low</u>	<u>Medium</u>	<u>High</u>	<u>Totals</u>
Happy Valley	No Data Available			
Stone's Throw				
Low	21	26	53	100(72)
Medium	17	29	54	100(24)
High	0	27	73	100(11)
Rambler				
Low	27	22	52	101(60)
Medium	31	24	45	100(42)
High	17	33	50	100(6)
Aspiration				
Low	23	24	54	101(136)
Medium	13	31	56	100(48)
High	25	13	63	101(8)
Euphoria				
Low	40	21	39	100(312)
Medium	37	20	43	100(49)
High	13	25	63	101(8)

Table 7-25

COMMUNITIES: MANAGEMENT INPUT
vs.
LEVEL OF POLITICAL CYNICISM
(In Percentages)

<u>Communities</u>	<u>Cynical</u>	<u>Medium</u>	<u>Trusting</u>	<u>Totals</u>
Happy Valley	No Data Available			
Stone's Throw				
Low	31	71	16	100(68)
Medium	9	64	27	100(22)
High	33	56	11	100(9)
Rambler				
Low	4	82	14	100(57)
Medium	12	79	10	101(42)
High	0	83	17	100(6)
Aspiration				
Low	13	69	18	100(129)
Medium	10	71	19	100(42)
High	22	78	0	100(9)
Euphoria				
Low	17	62	21	100(183)
Medium	15	62	23	100(26)
High	0	100	0	100(7)

the management and policymaking communication nets is that they meet the cultural model of the "good citizen." They are active and alert politically, more trusting of their leaders, aware of the need for expertise in management, and impressed by their civic obligations. They vote and they participate at a high rate and have the resources to be successful. When such a person acquires negative images of his water managers and seeks to restrict their options, he becomes a force that management can ill-afford to ignore. Moreover, when this type of person feeds his perceptions and negative orientations toward policy and policymakers into the management net at a disproportionately high rate, he is apt to engender fear and stultify progress.

Chapter VIII

CONCLUSIONS: A LOOK AT THE FUTURE

In this hunting expedition, or "ground-breaking ceremony" as Eugene Eaton calls it, tests of our data have managed to furnish us with several miniature models which provide us with a base and secure guidelines for more sophisticated testing of the data itself. Moving back through the chapters with our major model (see Chapter II) for a guide, we can see emerge miniature models of the water communicator (especially the one that depicts the transmitter of information into the management net). We have also garnered miniature models of policy resistor and facilitator in the local water agency economic system. To these can be added the beginner's models of the negative and positive perceiver of local water agencies. Finally, we have a rudimentary miniature of the political participant.

Careful examination of these elementary models yields test conclusions which we can give the status of highly tenable hypothesis that can be tested in more rigorous designs. The yields also provide extensive information concerning the way we should order our designs and pursue testing procedure. Some of the more salient hypotheses to which we refer are delineated near the closing of Chapter I on pp. I-8 and I-9 of this report.

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Specifically, the yields have indicated that we should give high priority position in future tests to several variables as potential determinants. Several of these include (a) overall community context and character, (b) life styles and living patterns, (c) socio-economic and situational elements, (d) ideologies, and (e) levels of participation.

These findings have comprised the first step in molding the handle to which Eugene Eaton referred in the summer of 1968. Helping get this far in molding the handle were a number of individuals and works deserving a vote of appreciation. First, we wish to recognize our special advisors, Dr. Bert E. Swanson, Director of the Center for Community Studies, Sarah Lawrence College, Bronxville, New York, and Dr. Phillip O. Foss, Chairman of the Department of Political Science, Colorado State University. Both men provided us with valuable and detailed hints and advice concerning theory, procedure, and substance. We also owe acknowledgement for assistance from our many workers and employees, especially our Graduate Assistants, several of whom contributed to this analysis in separate studies which have been filed as M.A. Theses at Colorado State University. These include:

- 1) Brian F. Rader, Happy Valley: The Politics of Local Water Agencies, 1966.
- 2) John E. Conger, The Study of Political Apathy in Suburbia, 1967.

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- 3) Charles J. Tripp, Toward a Political Information Model, 1967.
- 4) Thorfinn Tjersland, Organizational Adaptations of the Pebble River System, 1967.
- 5) DeSoto Jordan, Jr., Respondent Reactions to Survey Instruments, 1967.

All of the above contributed heavily to our theory and design as did a number of other Graduate Assistants, some of whom will file theses in the near future, namely, Michael B. Nelson, Roger Brady, Stanley Bastian, James E. Bottorf, Larry D. Munyon, Lyle Dechant, and Clifford Jennings.

To the efforts of these individuals must be added our own, some of which were reported in journal articles, professional and technical papers, and reports. A number of these include:

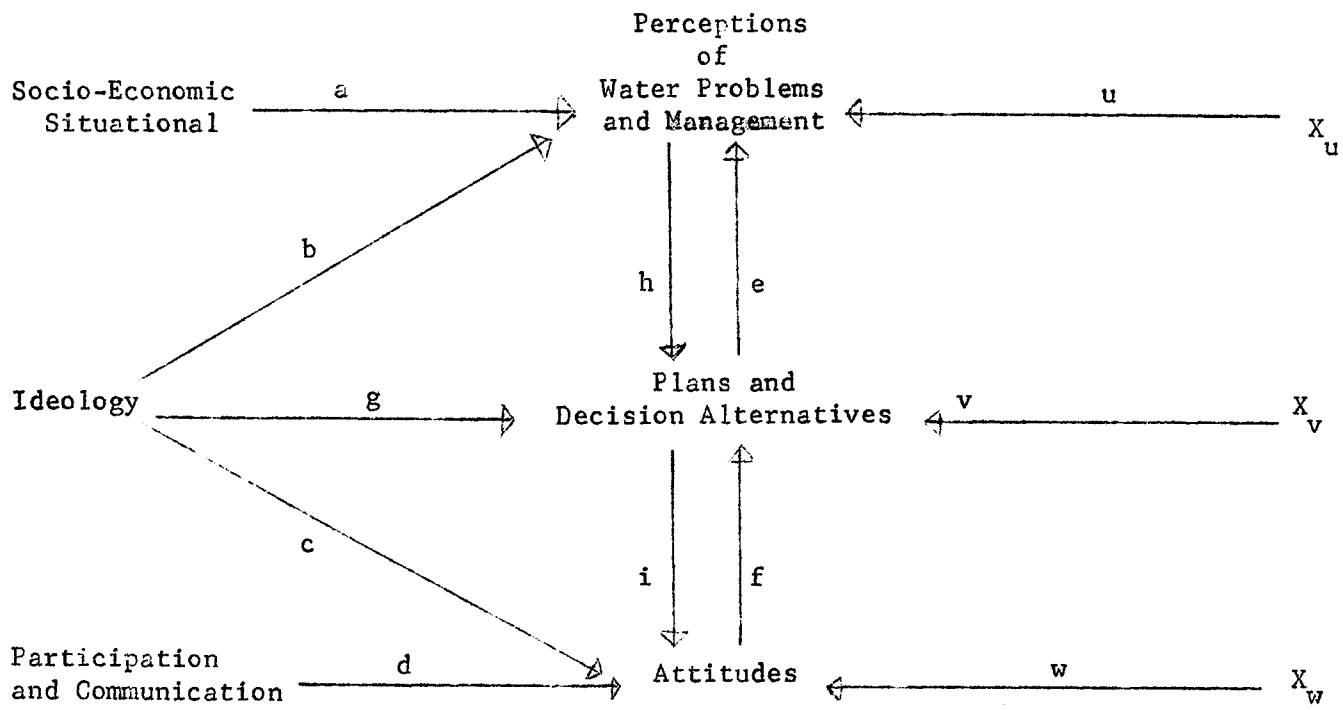
- 1) Charles L. Garrison and Duane W. Hill, "The Dynamics of the Public Roles in the Selection of Revenue Sources in Local Water Administration," Water Resources Research, Vol. 3, No. 4 (Fourth Quarter, 1967), pp. 949-962.
- 2) Duane W. Hill and Charles L. Garrison, "The Water Resources Engineer and Social Research: Potentials for Collaboration," Cambridge: Engineering Sciences Laboratory, Harvard University and the American Society of Civil Engineers, (1968).
- 3) Duane W. Hill, Charles L. Garrison, and Charles J. Tripp, "The Impact of a Water Agency's Image: A Study in the Politics of Public Relations," Paper delivered at the Rocky Mountain Social Science Association Meeting (May, 1968).
- 4) Duane W. Hill and Charles L. Garrison, "Local Water Agency Communications Nets: Measures of Interaction Between the Organization and Its Environment," unpublished paper being readied for publication in 1969.

Effects, such as those outlined above, have remained true to the social scientist's professional obligation to maintain simplicity in designs and empirical tests of those designs. Inspecting once again our miniature models, we would hypothesize that dependencies should now be ordered for testing in accordance with the following pattern. Life styles and living patterns play a large role in determining socio-economic conditions which, in turn, aid us in classifying individuals into categories that discriminate among them for purposes of differentiating among basic values and ideologies. Briefly, as Robert E. Lane points out, the enlarged socio-economic conditions under which a person develops, socializes him politically, and, at least, partially determines the character of his political behavior.¹ As shown in our miniature model of the political participant, the levels of general political participation show potential for discriminating among the varying types of other political behavior. These variables are ordered accordingly in our model for regression analysis (see Figure 5).

We are still confronted with the problem of interaction between variables, especially the hypothesized dependent variables such as perceptions, attitudes, and policy output. And even these may not be free of interaction with the hypothesized determinants on the left margin of the

¹Robert E. Lane, Political Life, New York: The Free Press, (1959).

Figure 5
REGRESSION MODEL



$$\begin{aligned}
 X_4 &= aX_1 + bX_2 + cX_5 + UX_u \\
 X_5 &= gX_2 + hX_4 + iX_6 + VX_v \\
 X_6 &= dX_3 + eX_2 + fX_5 + WX_w \\
 X_n &= \dots
 \end{aligned}$$

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design. Such problems can only be solved through experimentation, use of our theoretical imaginations, and cooperative design development. This is a challenge which we are eager to accept.