

AUGMENTATION AND META-PROCESS:
A STRATEGY FOR
RESPONSIVE AND RESPONSIBLE DECISION-MAKING
BY PUBLIC AGENCIES

by

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B.S. IN ARCHITECTURE, UNIVERSITY OF CINCINNATI
(1966)

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY

at the

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

September, 1971 (ie Feb 1972)

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Submitted to the Department of Urban Studies and Planning on September 13, 1971, in partial fulfillment of the requirements for the Degree of Doctor of Philosophy.

ABSTRACT

Communities and other groups which have reason to engage in joint decision-making are made up of diverse interests. Each interest, be it an individual, a collection of like-minded individuals, a corporation, or an institution, has its own values and perceptions of means-ends relations, i.e. its own model of the universe. When a group or community of actors, representing diverse interests, needs to choose collectively one course of action from a set of alternative courses of actions, they are not likely to all choose the same because each interest brings its values to bear on the alternatives that it perceives. We postulate that, if such a group or community employs an agent or agency to help the group develop and choose a course of action, such a public agency should not subscribe to a set of values of its own - in the sense that the individual interests who make up the group do. We further postulate that, within the limits of the group's shared values, each individual interest's values are sovereign.

This thesis addresses the question: HOW CAN A PUBLIC AGENCY GO ABOUT HELPING THE GROUP MAKE A COLLECTIVE CHOICE?

Goal-fabric and a prototype decision-making process are two useful constructs; they offer a common frame of reference for a discussion of how an individual interest brings its values and perceptions to bear in its decision-making and what kinds of differences arise between group members' preferences for alternative courses of action.

Augmentation of one alternative, by adding or enhancing some selected features of the alternative, can be used to make the alternative more responsive to those interests' values who rank the alternative too low to allow a group choice. If this process fails to produce a choice, the public agency has to look for, design, and help select a different process for making a choice; i.e. it has to engage in a meta-process. In

a combined strategy of augmentation and meta-process, meta-process activities actually have to precede, and then continue concurrent with, augmentation.

When the strategy of augmentation and meta-process is applied to a decision-making context of highway location and design, it becomes more operational.

For the highway location-design process, the proposed strategy translates into a program of community interaction. Community interaction is the interface between the highway agency and the community. A program of community interaction addresses specific community interaction objectives which, in turn, are aimed at making for a responsible and responsive decision-making process.

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Acknowledgements and disclaimer

The basic strategy of augmentation and meta-process which is proposed here was developed by me in 1968 and early 1969.

In the spring of 1969 I undertook to operationalize the strategy by developing its ramifications for the highway decision-making context. To do this I familiarized myself with current highway controversies by studying the location-design processes of four urban highways and by participating in the Transportation and Community Values Research Project, headed by Professor Marvin L. Manheim, in M.I.T.'s Urban Systems Laboratory. The project in which I participated from 1969 through 1971 was aimed at bringing community and environmental values into the highway location-design process. This work was sponsored by the American Association of State Highway Officials, in cooperation with the Federal Highway Administration, and was conducted in the National Cooperative Highway Research Program (NCHRP) which is administered by the Highway Research Board of the National Academy of Sciences - National Research Council. I also participated, to a somewhat lesser degree, in work of the Transportation and Community Values Project sponsored by the State of California, Business and Transportation Agency, Department of Public Works, Division of Highways, which was aimed at implementing the findings of the NCHRP project. The normative model for decision-making by public agencies proposed here, and particularly the operational version of the model in the form of a community interaction program benefited from my association with these research projects in several ways.

First, starting in the summer of 1969, and continuing through the spring of 1971, my work was partially funded by the Transportation and Community Values Project.

Second, the projects - being oriented to the down-to-earth realities of operating highway agencies dealing with typical location-design issues - offered me the sought-after environment for operationalizing the relatively abstract normative decision-making model. The strategy of augmentation and meta-process, as presented here, however, is my work; the basic assumptions, as well as the conclusions are not necessarily shared by the sponsors of the Transportation and Community Values Projects nor, for that matter, are they necessarily shared by all of the research staff of these projects.

Third, my association with the faculty, research associates, fellow graduate students, and personable secretaries was the most enjoyable, as well as the most stimulating and challenging part of the experience. Professor Manheim's insistence on bringing one's theoretical principles to bear on the every-day practical problems - and his talent for doing this - made my tutelage under him rewarding, even if it was not always easy to get his ear. While my association with all of the other project personnel was, for me, beneficial to one degree or another, I feel that my discussions

about the central concepts of the proposed strategy with fellow graduate student Harry Cohen were particularly rewarding.

The people closest to me, my wife and daughter, were helpful, patient, and forgiving to a fault even when my slowness in finishing the study devastated the long-laid holiday plans.

Hans Bleiker

Biographical Notes

The author was born (1936) and reared in Switzerland; the public school system of rural Switzerland provided his primary and secondary education. When, at age 16, he was to make the traditional choice of a trade for his career, he asked for, and received his parents' permission to go and see the world instead. He emigrated to the United States in 1953.

While working as a cow puncher in Wyoming and Montana in the mid-1950s, he partook in correspondence courses in mathematics and geometry. When he served a tour of duty as a jet aircraft mechanic in the United States Air Force he attended night school in the University of Maryland's Overseas Program - from which he received the "Medallion for Scholastic Achievement" in 1958. In the same year he became married to a Swiss childhood friend, Annemarie Haeberli.

In 1960 their only child, Stephanie was born, and in the same year the author entered the University of Cincinnati's six-year cooperative program leading to the degree of B.S. in Architecture. In the course of time he became a member of the Delta-Phi-Delta, Phi-Eta-Sigma, and Scarab honorary fraternities. In 1966 he graduated with honors at the head of his class. The University's Cooperative Program awarded him the Herman Schneider Medal for having made particularly constructive use of the cooperative work experience feature. The American Institute of Architects awarded him the Medal for General Excellence in Architecture and a graduate study fellowship. The Scarab Fraternity awarded him the Scarab Prize for leading his class with the highest cumulative marks in the design courses.

The author entered the Ph.D. program of M.I.T.'s Department of Urban Studies and Planning (then: Dept. of City and Regional Planning) in 1966. In 1969 he started working for the City of Lynn's (population 90,000) Department of City Planning on a part-time basis, and in February 1971 he was appointed Planning Director.

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PART A:

THE NATURE OF THE PROBLEM OF MAKING A
COLLECTIVE CHOICE

- CHAPTER I: INTRODUCTION TO THE PROBLEM
- CHAPTER II: RULES FOR AGGREGATING DIFFERENT
INDIVIDUAL PREFERENCE ORDERINGS
- CHAPTER III: THE MAKING OF AN INDIVIDUAL
INTEREST'S PREFERENCE ORDERING
- CHAPTER IV: DIFFERENCES IN INDIVIDUAL
PREFERENCE ORDERINGS

In these first four Chapters we pose the problem confronting a public agency which is motivated to help a community find and choose a course of action.

We enumerate the criteria which any decision-making process that is used by such an agency should meet, and we examine why such a public agency cannot use any of the available decision-making strategies. Two conceptual constructs are introduced to provide a framework for understanding the kind of differences that give rise to actors having disparate preference orderings.

CHAPTER I

INTRODUCTION TO THE PROBLEM

I.A. The Nature of the Problem

I.B. The Nature of Planning

I.B.1 The Nature of Individual Interests

I.B.2 The Nature of Groups, Communities

I.B.3 The Nature of the Public Agency's Responsibility

I.C. Summary

ABSTRACT

The problem we want to address is "What should a public agency's role be in helping a group of actors make a collective choice?". To put this question more succinctly we first look at the nature of individual interests, the nature of groups, and the proposed nature of a public agency.

An (individual) interest is the smallest entity that we shall deal with; individuals, corporations, institutions, and like-minded collections of individuals are examples of interests. An individual interest is an entity which has a single consistent set of values; it also has one particular view of the universe, i.e. it has its own model of means-ends relations. We observe that an interest applies its values to its view of the universe, and is able to produce a preference ordering over the alternative courses of action that it perceives feasible. Having ranked the perceived alternatives, an interest then pursues a course of action that it ranks high. If a decision is made or affected by a group, each interest is - or tries to be - represented in the group decision-making by an actor.

We also observe that a community, or most any group which is not expressly chosen for the like-mindedness of its members, is made up of various different interests and thus does not subscribe to one homogeneous or consistent set of values. While a group may share some values and some views of means-ends relations, the characteristic which is primarily of interest to us here is that they do not share all of their values and that they do not all share the same view of the universe. Given a set of alternatives, they therefore do not necessarily come up with the same kind of preference ordering.

It is the public agency's role to help such a group make a collective choice. We postulate that the public agency does not have a set of values of its own in the sense in which the individual interests have sets of values; the public agency is relatively value-free.

It is in light of this definition of the public agency and of the community that we raise the question, "How can a public agency help the group of actors reach an agreement on a course of action?".

People who - rightly or wrongly - believe that they have some control over their destiny make plans.

When we make - or try to make - decisions rationally,¹ the quick decision which is of relatively little consequence as well as the decision over which we labor at length because it has far-reaching consequences, - we make both on the basis of our prediction of their consequences on those things we value: on our aspirations and hopes, on our needs, wishes, and dreams, i.e. on our values.

There are many conditions under which it is difficult to find the course of action which is most consistent with one's values because there are a great number of conceivable courses of action and their consequences are hard to predict. In this study, however, we shall look at a decision-making problem which arises from the fact that a public agency does not have a single, internally consistent set of values as a basis for evaluating predicted impacts and thus make choices.

I.A. The Nature of the Problem

We will, in this study look at only one particular situation where it is particularly difficult to proceed with planning, i.e. with making decisions rationally. The situation arises from the fact that, while each man has a dream which he has in mind when he chooses a course of action, different men have different dreams, and thus, being rational -

¹The term "rational" is used here in the sense that we use it in economics; economic man - i.e. rational man - maximizes self-satisfaction.

or at least trying to be rational - they choose different courses of action. This presents a problem when a community of men has to act as a group, particularly when they have to choose one collective course of action from among a set of mutually exclusive courses of action.

The rational individual deals with this situation by moving all possible levers to get the group to choose the course of action he likes best. Just because he finds himself in a group decision-making situation, the problem has not really changed for the individual; it has just become more complicated. Norton Long suggests that each interest which finds itself in this situation uses, as best as it can, the other interests in its pursuit of furthering its own values.²

Say a group of diverse interests hires a professional staff to help them make a collective decision. Say the group of diverse interests asks this staff to be truly disinterested, to have no hidden agenda, to work only for the welfare of the group, i.e. say this group, or community, creates a public agent or agency to help them develop and choose a course of action.³

WHAT IS THE NATURE OF THE PROBLEM WHICH FACES THIS HYPOTHESIZED PUBLIC AGENCY? HOW SHOULD IT PROCEED TO HELP THE GROUP DEVELOP AND CHOOSE A COURSE OF ACTION?

These are the questions that this study addresses itself to.

²Long, Norton, "The Local Community as an Ecology of Games", American Journal of Sociology, LXIV (1958), pp. 251-261.

³The public agency that we will be discussing henceforth is this hypothesized public servant working on behalf of a pluralistic, heterogeneous group of interests.

There are many descriptive and normative group decision-making theories that bear on this problem.⁴ This study - with the exception of Chapter VII and the appendix - is normative; it makes use of enough descriptive decision-making material,⁵ however, to make the normative model realistic and feasible for implementation.

While all of the first four chapters serve to define the nature of the problem at hand, we need to make some observations and state some basic assumptions so that we can pose the problem in more specific terms. Chapter I accomplishes this; here we examine the nature of planning, the nature of individual interests, the nature of groups, and - in light of these - the nature of the public agency's responsibility.

I.B. The Nature of Planning

Definition: planning

Planning is the overt effort of an individual interest to make its choice of a course of action consistent with its values.

The rationale for planning can be outlined thus:⁶

⁴They are discussed in some detail in Chapter III.

⁵Chapter VII and Appendix A are descriptive. They are used to develop an operational version of the conceptual normative decision-making strategy developed in Chapters V and VI.

⁶This sketchy explanation of why the individual interest plans, does not pretend to exhaust the subject. A good argument can be made for the position that for many an interest "planning" has a purpose other than the desire to make choices and undertake actions which are consistent with his values. For example, many administrators find that, more than anything else, after their decision has been implemented they want to be able to demonstrate credibly that they made their choice rationally, that there was no spuriousness or arbitrariness used on their part in making the choice.

Observation #1:

- 1) Each interest holds a set of values,
- 2) Each interest has its own view of the universe and its own model of means-ends relations.⁷
- 3) Applying its values to its view of the universe, each interest can⁸ construct a conceptual network of goals and actions, which links its highest goals with the perceived alternative courses of action via its perceived means-ends relationships.⁹
- 4) Each interest can¹⁰ rank the perceived alternative courses of action.
- 5) Each interest pursues that course of action which it ranks highest.

Planning requires three different kinds of activities: first, it (usually) is necessary to make predictions in the face of uncertainty; second, alternative courses of action have to be developed, and third,

⁷"View of the universe" and "set of values" corresponds to what Gunnar Myrdal calls two kinds of "opinions": beliefs and valuations are the respective terms he uses.

Myrdal, Gunnar, Value in Social Theory, (N.Y.: Harper, 1958), p. 71.

Myrdal, Gunnar, Objectivity in Social Research, (New York: Patheon Books, 1969), Chapter III.

⁸To say that each interest can construct its own goal fabric is not to say that it will.

⁹This concept is explored further in Chapter III; see "goal fabric".

¹⁰As above, even though each interest can conceptually rank the perceived alternative courses of action, it does not necessarily do so.

one has to make choices among the alternative courses of action by bringing to bear a system of values. In Chapter IV we will get deeper into the exploration of how the individual interest goes about planning; we will do this by developing the concept of a goal fabric and a prototypical decision-making process.

I.B.1 The Nature of Individual Interests

There is at least one school of thought which reduces all decision-making entities to their smallest element: the individuals who belong to them. This school of thought argues that groups, corporations, institutions, and any other phenomena or agglomerations of people do not have value systems of their own - except for the values that their members bring to them.

However, we shall use the concept of an individual interest - or an interest - as the smallest decision-making entity, and we shall specifically include corporations and institutions. We shall do this on the strength of the observation that such phenomena as corporations and institutions take on a nature of their own; they exhibit value systems, behavior patterns, etc. - i.e. a character - which cannot necessarily be explained or predicted on the basis of knowledge about the values, behavior, and character of the individuals who make up their memberships.¹¹

¹¹Davidoff and Reiner, for example, use a more person-oriented definition of "value" than is used here; their definition would not allow us to ascribe a value system to a corporation or to an institution.

Davidoff, Paul and Reiner, Thomas A., "A Choice Theory of Planning", Journal of American Institute of Planners, XXVII (May, 1962) 102-115.

Definition: individual interest

An individual interest is a person, a collection of like-minded persons, a corporation, an institution, or any other entity with one view of the universe and a single, internally consistent value system.¹²

Like any other concept we use here, individual interest is not an absolute concept; it has meaning only in a particular context. Members of an individual interest share the values which are relevant to the particular context - but not necessarily all their other values. It is therefore conceivable that we would divide up a given population into one set of interests when speaking of one issue and into another set of interests when speaking of a different issue.¹³

The individual interest is well suited to do planning because, with its one view of the universe and its single, consistent set of values, it can make use of subjective judgments, estimates, and hunches; from

¹²We shall use "interest" and "individual interest" interchangeably.

The term "value system" is more appropriate here than simply "value" because, as is shown in Chapter IV, typically an interest has more than one goal; in fact, an interest has a whole fabric of goals and, therefore, more than one dimension and one measure for evaluating alternative courses of events resulting from alternative courses of action.

¹³Take, for an example, the children in an elementary school grade as the population. The teacher finds that when it comes to changing the daily schedule, two of the relevant interests into which the children fall are: 1) those who belong to the school orchestra and 2) those who play no instrument. When assigning a new traffic-safety boy for a particular pedestrian school crossing, the teacher needs to think in terms of those children who need to use the pedestrian crossing in question on their way to school and those who don't. The children who use the crossing make up an interest which needs to be divided further into those children who are bigger and stronger than the traffic boy being assigned, and who - therefore - may want to challenge his powers as a quasi-policeman, and those who are not. For issues of dress code, the teacher immediately thinks of the two most obvious interests which are relevant and are sure to emerge: boys and girls. In short, the issue being decided determines which interests are the ones that are relevant and what their make-up is;

its point of view subjective knowledge is not materially different from objective knowledge. There is never any question what dreams it needs to be consistent with; there is only the question of how to be consistent with them.

I.B.2 The Nature of Groups, Communities

Since we have defined an individual interest to include collections of like-minded individuals, the term "group" has to refer to collections of individuals who do not share the same values. The term "community" has various meanings in every-day usage. We shall use it as a synonym for "group", and we do so because this can help us make a point: namely, the "group" decision-making we speak of in this study is applicable to "community" decision-making in the everyday sense of the word.

Definition: group, or community

Group and community are interchangeable terms; a group or community consists of two or more individual interests who have reason - or are believed to have reason - to work jointly for some common purpose.

Though a group, or a community, has a common purpose - e.g. it needs to decide which side of the street to park the cars on so that the snow plow can get through - the chief characteristic of a group is that it is heterogeneous, that it is made up of different interests, with different - and at least to some minimum degree conflicting - values; e.g. residents from each side of the street each wanting their side to retain the parking.

the concept of individual interest is relative to the context.

Definition: purpose of a group

Diverse interests join in collective decision-making to address a perceived problem jointly; the solution of that perceived immediate problem is the group's purpose.

The popular use of the term "community" often focuses on the common purpose(s) which bring the various interests together and those values which its members share, i.e. its cultural values. This may be appropriate when comparing the characteristics of different groups, but, for the analysis of how a group can make a collective decision in regard to a common purpose, the differences in the group members' values demands our first attention. Of the two characteristics of a group's members - having a common purpose and adhering to different value systems - the second characteristic is the important one for us because it tells us that a group cannot use the decision-making rationale the individual interest uses.¹⁴ The crux of the matter is, of course, that members of any given group not only subscribe to different but in fact to conflicting values.¹⁵ Thus, decision-making for any non-homogeneous group, i.e. group decision-making, has to proceed without the benefit of having a single, consistent set of values.¹⁶

The conceptual model of planning described in Observation #1 is not the only thing that we can't use. The individual interest can avail it-

¹⁴See Observation #1.

¹⁵Myrdal, Gunnar, Value in Social Theory, (New York: Harper, 1958), pp. 50-52.

¹⁶Martin Patcher makes this case in "Decision Theory in the Study of National Action: Problems and a Proposal", Journal of Conflict Resolution, June, 1965.

self of a number of very useful tools which help it remain consistent with its values when the choices become very complex and their implications - in terms of its values - are difficult to trace; groups cannot use these tools for making choices.¹⁷ This is not to say that these tools can't be of some help, however, in group decision-making. While they can't be used to produce a ranking or choice, they may be applied, in some situations, to contribute to the understanding of a complex problem.¹⁸

The behavior of each of the individual interests who is a member of a group is essentially governed by the decision-making model sketched

¹⁷ Statistical Decision Theory, linear programming, as well as other maximizing and optimizing techniques cannot be used 1) because it would mean allowing unacceptable assumptions and/or 2) because a group of interests cannot meet all of the necessary conditions. For example, Statistical Decision Theory, which certainly is a very powerful theory for the individual interest, cannot be applied in any context which fails to meet one or more of the following criteria: 1) existence of canonical basis, 2) ability to quantify preferences, 3) ability to quantify judgments, 4) transitivity of preferences, and 5) substitutability of prizes. Groups with non-homogeneous value systems, i.e. groups of interests, may fail to meet the fourth criterion: transitivity of preferences. (See discussion of this point in Chapter III.)

Pratt, John W; Raiffa, Howard; & Schlaiffer, Robert, Introduction to Statistical Decision Theory, (N.Y.: McGraw-Hill, 1965). See Chapter II, Section 3, pp. 5-10.

¹⁸ Raymond A. Bauer, "The Study of Policy Formation: An Introduction", in The Study of Policy Formation, (New York: The Free Press, 1968), reviewed; J.A.I.P., May 1969, p.208. He points out that while such techniques as Operations Research, Statistical Decision Theory, and Welfare Economics do not and cannot produce a single best solution to a problem involving different value systems, they may nevertheless be able to shed some light on some hard-to-understand issues.

out in Observation #1. That is, membership in the group does not change the individual's basic approach to its decision-making; membership in the group simply becomes the context in which the individual interest has to operate.¹⁹

Interests do not always find themselves members of a group by free choice. They may find that they have a purpose but very little else in common. Different interests find nevertheless that they need to work out some problems jointly. Group membership may be forced on them because unilateral action is infeasible or impossible, because one's actions have serious effects on other interests, or because some relatively arbitrary jurisdiction - such as a political boundary, geographic proximity, etc. - binds them together.²⁰

¹⁹ Analyzing the context within which the individual interest is operating is the province of game theory. The decision-making literature consists of two major categories of decision-making theories; there are the descriptive studies of how decisions are made, and there are the prescriptive studies of how decisions ought to be made. (See Chapter III for a wider discussion of the decision-making literature.) A large part of the prescriptive decision-making literature concerns itself with how the individual interest can make the most of the particular decision-making context in which it finds itself. Among the descriptive models, Norton Long's suggestion of the decision-making context as an ecology of games is one of the most provocative suggestions for perceiving the individual interest's relationship vis-a-vis the group.

Long, Norton, "The Local Community as an Ecology of Games", American Journal of Sociology, LXIV (1958), 251-261.

²⁰ Actions have several kinds of side-effects. Some side-effects may affect the outcome for another actor; when the initiating actor is aware of them and - in some fashion - takes account of them. We normally refer to them as "impacts". When the initiating actor does not take a side-effect into account at all, we refer to it as "spillover".

For a good discussion of this see the section on "Public Goods and Externalities" in "Public Policy and Normative Economic Theory" by Richard Zeckhauser and Elmer Schaeffer, in The Study of Policy Formation, (New York: The Free Press, 1968), reviewed; J.A.I.P., May 1969.

Observation #2:

The typical geographically defined, collection or group of people, institutions, and corporations - e.g. what is usually referred to as a community or a neighborhood - is not homogeneous. It does not subscribe to a single, internally consistent set of values; it is made up of diverse interests.

The concept of "community" - at least in the sense planners use it - gains much of its meaning from the tension between the purpose which its members share and the values that they do not share.²¹ In the context of public decision-making, the concept of "the community", or the group, is essentially synonymous with the concept of "the public", and we will use the terms interchangeably.²²

Quite aside from their different values, members of most groups also have some common values. Because its shared values give the group in question the character by which the group is known, we may think of the group's shared values as its cultural values - as opposed to the unshared, individual values.²³ For example, a group consisting of interests with disparate value systems may all put great stress on formal education. Education would then be considered one of the group's

²¹Dakin discusses the planner's notion of "the community" and how planners tend to think in terms of what it "ought to be".

John Dakin, "The Background of Ideas in Planning", The Journal of the Town Planning Institute of Canada, II, Nov. 3, 1961, pp. 96-107.

²²See Section A.3 of Chapter II for a treatment of the question: Who is, and who is not, a member of a group?

²³Though the shared values are a key to characterizing a community, some of the unique and unshared values, or the differences between constituent interests' own values can, in some cases, also contribute to the characterization of the group.

cultural values.

Definition: cultural values

A group's cultural values are those values which the group's members share; a group's set of cultural values consists of the intersection of all their sets of values.

The cultural values describe a group; and, what may be more important, they also contain the standards and norms by which the group settles disputes. Particularly in the case of a group which has existed as a group for some time and which has had to make many collective decisions, the group will have developed norms and tests²⁴ defining its conception of fairness, justice, and equity, - all of which become part of its cultural values. In the case of a group which has not had occasion to work out conflicts and compromises and thereby discover its norms and standards, one of two things happens. First, there is the possibility that the group is given - and accepts - cultural values from the larger society it is a part of. Second, if this is not the case, it will develop its own cultural values in the soul-searching process of actually settling disputes.

I.B.3 The Nature of the Public Agency's Responsibility

We have been setting the stage so that we may explore what the hypothesized public agency's responsibilities are. The agency we are hypothesizing is entirely unlike an individual interest; it does not have a value system of its own in the sense that the individual interest does.

²⁴These norms and tests are the rules for playing - what Norton Long calls - the over-all social game, "giving all the players a set of vaguely shared

It has to work in a context of a group which is defined as not having a single, consistent set of values.

The kind of public agency we shall hypothesize is a "public servant" in the directest sense of the word. The agency is assumed to be motivated only by the desire to help the group achieve a particular purpose by helping it find and choose a course of action which is desirable, feasible, and equitable.²⁵

There are, of course, alternatives to the public agency-motivation of helping the diverse interests find and choose a course of action - which is proposed here. As Frieden points out, for example: "To some socially (as opposed to physically) oriented people in the (planning) field, planning involves a process of redistributing resources through public action".²⁶ This kind of motivation would make for mission-oriented planning which we are not addressing in this study.²⁷

aspirations and common goals".

Long, Norton, "The Local Community as an Ecology of Games", American Journal of Sociology, LXIV (1958), 251-261.

²⁵Kaplan adds to our capability for understanding these issues by distinguishing between "motive" and "purpose" of planning.

"Motives concern the relation between the (professional) activity and the whole stream of conduct of which it is a part; purposes relate to activities of inquiry to the particular scientific problem which they are intended to solve." We are using these terms in this sense.

Abraham Kaplan, The Conduct of Inquiry, (San Francisco: Chandler Publishing Co., 1964). p. 374.

²⁶Bernard J. Frieden, "The Changing Prospects for Social Planning", J.A.I.P. XXXIII, September 1965, pp. 311-323.

²⁷What would be only a slightly more community-oriented agency motivation would be to work for the conservation of the group's resources and for the general efficiency with which resources are expended.

If the public agency has a value system of its own - and, coming on the scene with a mission, is tantamount to arriving with a value system just like the various individual interests in the group - then it is just another individual interest. In that case, the public agency can use the decision-making procedure outlined for the individual interest. It can, in fact, also make use of the various tools, such as Statistical Decision Theory, Linear Programming, Operations Research, etc., to be as sure as is feasible that its actions are consistent with its values.²⁸

Let us assume, then, the following situation:

- 1) A community (as we have defined it) feels that it needs to develop and choose a collective course of action; it defines an immediate purpose.
- 2) The community hires professional planning staff for the express purpose of helping it in the task of developing and choosing a course of action which is desirable, feasible, and equitable.

Assertion #1:

The public agency responsible for helping a community develop and choose a course of action does not have a set of its own values, in the sense that the individual interests who constitute the community membership have their own values; the public agency is relatively value-free.²⁹

²⁸Admittedly, there are public agencies which have a mandate to work for some specific goal. A police agency has to protect life and property; a public health agency has to protect the public's health; a public school system must educate the young, etc.; and, these public agencies, of course, are able to use the decision-making tools outlined above. We are not speaking of such agencies here; we are speaking here only of a public agency whose mandate is limited to helping the group of individual interests find and choose a course of action.

²⁹The reader may feel that this sweeping assertion has removed the entire study from reality; he may want to argue that, not only do no such agencies exist, but no such agencies can ever exist.

Let us, for the argument's sake assume that this is so; i.e. that a public agency is like an individual interest in that it has its own value

If our main point in the definition of a community is the fact that it consists of individual interests, each with its own set of values, then we must look upon the public agency as the relatively value-free participant in group decision-making; relatively value-free vis-a-vis the individual interests, rather than absolutely value-free, because every human being has a value system and every organization is bound to develop and cherish some values of its own. We are not particularly interested in these. We are interested in value systems that relate to and bear directly on the evaluation of perceived alternative courses of action.

The crux of the value-issue here is that we have deliberately defined the public agency to be different from the community's constituent interests in that it, itself, is not such an interest, that it is not - a priori of studying the issues - ³⁰ an advocate of one or several of them, that it is completely subservient to the entire community of interests.³¹

system.

First, we can save ourselves the trouble of this inquiry because there are excellent models for decision-making by individual interests (i.e. by anyone with a single, internally consistent set of values); the public agency can join the corporate planner and make use of such powerful theories as Statistical Decision Theory. Second, if anytime a group - or even an individual interest - hires some professional planning staff, this staff is bound to arrive with, what amounts to, a hidden agenda, isn't it rather stupid ever to hire professionals?

³⁰ We need to qualify the non-advocacy claim to the effect that a priori of determining how the agency can best help the community, they can't be advocates; after having determined what the issues are, it may very well be that one of the activities which may be most helpful to the group as a whole is for the agency to advocate for one or more of the constituent interests. (See Section C.4, Chapter II.)

³¹ Although definitions of the public agency planner almost always focus on the fact that the planner, as a professional, is not to serve his own personal values but is to devote his efforts to furthering his client's values, these definitions have not focused as much as they might have on the situation where "the client" consists of a group with members of

Asserting that the public agency ought to be relatively value-free is not the same as, and should not be confused with, asserting that the public agency - and therefore its staff - are objective to a degree which, somehow, puts them above the use of values. The professional's ability to make decisions "based on pure fact" without making important value assumptions has little currency - and rightfully so.³² Insisting, however, that the professional staff not work for a hidden agenda of its own is important. If a group or community of interests cannot insist - and get its way - that the staff that it hires work for the group, then no group should hire a professional planning staff. Not even the most

conflicting values. The concept of advocacy planning can be interpreted as the rejection of the notion that it is possible - or, at least, that it is practical - to work for all of these diverse interests. John T. Howard put it this way when he enumerated the characteristics of professionalism,

- 1) "it is dedicated to the public welfare,
- 2) it is subject only to the primacy of the public interest; a professional works not only for, but in behalf of, his clients in a confidential relationship, submerging any personal interest to the interests of the client."
- 3) etc.

As quoted by James E. Lee, in "Planning and Professionalism", J.A.I.P., XXVI, February 1960, p.26.

Davidoff and Reiner see it this way: they point out that the public, i.e. the community, constitutes a client with very elusive values, but they suggest that somewhere deep within the pluralistic client there is a set of values. They argue the planner needs to work for these - rather than his own personal - values.

Davidoff, Paul and Reiner, Thomas A., "A Choice Theory of Planning", J.A.I.P. XXVIII (May, 1962), 102-115.

³²The meaning of "objectivity" of the scientist has long been debated, and for most scientists, the notion that scientists need not make value judgments has been rejected in the last few decades. For a thorough discussion of the development of this thought in the field of sociology, see Pat Duffy Hutcheon, "Sociology and the Objectivity Problem", Sociology and Social Research (Jan. 1970) 153-172.

A much earlier (1938) discussion of the same subject lists a number of authors who already at that time dismissed the notion that there was a value-free science. (Cont.)

skeptical reader should be ready to argue that humans and organizations alike are inherently and necessarily value-laden to the point where they cannot help a group in the agonizing task of finding and choosing a course of action.

The public agency's neutrality on individual values does not carry over to cultural values; the agency should adopt, and work strictly within, the group's cultural values. In fact, the agency needs to learn all it can about the cultural values because they hold the key for resolving possible conflicts within the group. Neutrality on the unshared values does not necessarily mean that the agency might not at some point in the process decide that it ought to further one interest's position more than another's; the test of the agency's neutrality is best couched in terms of non-bias.

Definition: bias

To be biased is to be directed by unacknowledged values - in contrast to being directed by explicitly acknowledged values.³³

See Hornell Hart "Value Judgments in Sociology", American Sociological Review, III, 1938, pp. 862-867. Talcott Parsons, quoting Alfred Marshall, wrote in 1938: "The most reckless and treacherous of all theorists is he who professes to let facts and figures speak for themselves." Talcott Parsons "The Role of Theory in Social Research", American Sociological Review, III, 1938, p. 15. We deal with this in Section B of Chapter II: Identification of Applied Values.

³³This is essentially Gunnar Myrdal's definition.

Myrdal, Gunnar, Value in Social Theory, (N.Y.: Harper, 1958).

The public agency thus needs to acknowledge explicitly all of its relevant values. And, since it is being hired by the group for the purpose of helping it develop and choose a course of action, it is reasonable to assume that the values which the group will ask the agency to embrace, a priori of getting involved in a specific problem, are values that are the group's cultural values.

Britton Harris has suggested that, if we cannot handle the various values held by members of the community, we cannot develop a general theory of city planning. This suggests indeed that the development of a planning process - i.e. a role for a public agency - which is responsive and responsible to the pluralistic community - should be our first concern.

We hope to demonstrate that defining the community as a collection of different interests which needs to make a collective choice and asserting that the public agency has to be relatively value-free to be a public servant, does not prevent the public agency from contributing to the development of alternative courses of action which are responsive to the interests' values - in a manner which is responsible to the entire group.

I.C. Summary

We are assuming that a group or community of diverse interests perceives a problem which they must deal with collectively. We also are assuming that the group hires one or more professionals to help them find and choose a collective course of action which will achieve the purpose that the group has collectively identified, i.e. they create a public

agency. The central question, on which the entire study focuses, is raised:

HOW SHOULD THIS PUBLIC AGENCY PROCEED TO HELP THE GROUP DEVELOP AND CHOOSE A COURSE OF ACTION?

Obviously, the answer to this question - and therefore the thrust of the entire study - must be in the imperative: "THE PUBLIC AGENCY SHOULD...", or "THE PUBLIC AGENCY MUST..." The study must, then, produce a normative model of behavior for the public agency with both prescriptive and proscriptive statements.

In order to be in a position to develop this normative model, we need to address ourselves to a preliminary question:

WHAT IS THE NATURE OF THE PROBLEM WHICH FACES THIS HYPOTHESIZED PUBLIC AGENCY?

The concepts which are central to any answer to this question deal with the nature of the group, the nature of the various interests who make up the group, and the nature of the public agency.

An individual interest is an entity with one view of the universe and with one single, internally consistent set of values;³⁴ a group consists of several individual interests who have reason to work jointly for some common purpose.³⁵ Each individual interest understands "rational decision-making" to mean his making of choices which are consistent with his set of values. It is quite obvious what the professional's role is if he works for an interest: he has to bring his

³⁴See the complete definition of an individual interest in Section B.1 of this chapter.

³⁵The definition of group is given in Section B.2 of this chapter.

client's values to bear on the kinds of alternative courses of action that are developed and on the making of a final choice among these alternatives. But, what is the professional's role who works for a community of diverse interest, a client who does not have one single, internally consistent set of values? It is not obvious what role such a professional - i.e. our public agent or agency - should play. And yet, the problem is a real one; it is not contrived; there are many such public agencies who are supposed to serve not one single interest but a group of diverse interests.

It may happen in some instances where a professional finds that his client consists of many interests, with disparate value systems, that he simply chooses a single, internally consistent value system for the group; i.e. he imposes a value system on the group. The author, for one, rejects this "approach" to the problem out of hand and, in fact, tries to make it quite clear that this study is carried out for the sake of those agencies which are not self-serving interests in the guise of public agencies but are actually motivated to serve the community of diverse interests who hired them to work on their (i.e. the community's) problem. We consequently, make the assertion that the public agency does not have a set of values of its own, in the sense that the various interests have values that bear on the collective purpose at hand, i.e. that the public agency is value-free relative to the community's common purpose.

The entire problem of finding out how a public agency should proceed to help a group or community of diverse interests develop and choose

a course of action only can arise in a pluralistic society. Thus, not only is the approach which we shall develop limited to the context of a community consisting of different interests, the question which the approach intends to answer would be a mute question in the context of a different political structure.

CHAPTER II

CRITERIA FOR A GROUP DECISION-MAKING PROCESS

- IIA. Understandability and Believability
 - II.A.1 Perceptions
 - II.A.2 Definition of the problem, the common purpose
 - II.A.3 Membership in the group or community
 - II.A.4 Independence from "irrelevant" alternatives
 - II.A.5 Conceptual compensation
- IIB. Identification of applied values
 - II.B.1 Sovereignty of individual values
 - II.B.2 The ultimate evaluator
 - II.B.3 Comparison of utilities
- IIC. Role of the group's cultural values
 - II.C.1 Evaluation of the decision-process
 - II.C.2 Compassion
 - II.C.3 Equality
 - II.C.4 Un-represented interests
- IID. Adaptability
 - II.D.1 Decision variables and the set of alternatives
 - II.D.2 Process sequence
- IIE. Summary

ABSTRACT

There are four basic criteria which the decision-making process that we hope to develop must meet.

First, all of the group members must either be able to understand the decision process and what the public agency is doing, or they must believe and trust the public agency enough that they are willing to take the agency's word for what it is doing in those instances where they do not understand the process. Second, whenever during the decision-making process values are brought to bear, it has to be clear to all whose values they are. Third, the group's cultural values provide the envelope for all public agency activities; concepts of fairness, justice, equity and propriety constitute the parameters for the public agency's range of actions, as well as for the constraints within which alternative courses of action have to be developed. These operational concepts have to be based on the group's cultural values. Fourth, changes that occur over time have to be accommodated in the decision-making process.

These criteria - which are so basic that they have meaning in the context of any group - can be used to extrapolate a number of culture-specific criteria for public agency behavior in the context of pluralistic, North-American society of the 1970s.

Man has been making collective choices of one sort or another for as long as he has undertaken projects that required a joint effort, and the situation that we are describing, i.e. where a public agency is hired strictly for the purpose of helping a group of individual interests, is not the only group decision-making context. We do not pretend to address ourselves to any context except to the one explicitly stated.¹

We need to determine what rules should circumscribe, and thus begin to describe, the public agency's role in helping the community of interests find and choose a course of action. To this end we will, in this chapter, develop the criteria which the decision-making process generally, and the public agency's activities more specifically, must meet.

Thus far we have spoken of individual interests as the elemental decision-making unit. What's actually observable, however, is not an interest but an interest's spokesman. Let us distinguish, therefore, between an interest and the spokesman for an interest; the two are not always the same.

Definition: Actor

An actor is a spokesman or an initiator of action for an individual interest.

The typical case we have in mind thus has each interest represented

¹ If we defined "group decision-making", particularly the public agency's role, differently, this survey would have entirely different meaning. For example, Rossi defines community decision as a "choice among alternative modes of action ... which is made by an authoritative person or group within the community institutions". Rossi, Peter H. "Community Decision-Making", Administrative Science Quarterly, I (1957) pp. 415-443.

in the group decision-making process by an actor.² Each actor works strictly for his constituent interest; he has - as far as we are concerned - no goals of his own.³

When we speak of a public agency's involvement in the decision-making process we want to be careful to distinguish those elements of the agency which are directly involved with the decision-making and elements of the same agency which have nothing to do with the particular group in question. It is convenient to think of the public agency as one of the several actors - though a unique one - participating in the group's decision-making.

Definition: public agency actor

The public agency actor consists of only those parts or elements of the public agency which are directly responsible for - and therefore involved in - helping the group of interests develop and choose a course of action.

² A very clear example of an actor representing an interest is provided in the case where an absentee-owned business is represented in local decision-making by an executive who has been expressly assigned the task of representing a company in local affairs, e.g. as was studied by Pelligrin and Coates. Pellegrin, Roland Y. and Coates, Charles H. "Absentee Owned Corporations and Community Power Structure", American Journal of Sociology, LXI(1956), pp. 413-419.

³ In the case where an interest represents itself and acts in its own behalf, the terms actor and interest refer to the same entity except that the term "actor" is used in the context of actions while the term "interest" is used in the context of values. The case where we have an actor who does not represent an interest is - at least as we have defined the relevant concepts here - pathologic. It would have to mean that an actor is overtly claiming to represent some interest but, in fact, is covertly representing some values which he holds himself. Since we have said that an interest can represent itself and thus become its own actor, an actor representing "no interest" really has to mean that he is representing no interest which the group is willing to recognize as having a legitimate set of values. We will deal with problems arising from something less than a one-to-one relationship between interests and actors in Chapter IV and thereafter.

On the basis of Observations #1 and #2, describing the rationale for an individual interest's decision-making and describing the pluralistic nature of a group respectively, and on the basis of Assertion #1 hypothesizing the public agency's relationship and responsibility to the group, we can begin to circumscribe the decision-making process by developing four basic criteria that it must meet:

- A) understandability and believability,
- B) identification of applied values,
- C) role of the group's cultural values and
- D) adaptability

IIA: Understandability and believability

Each interest has its own view of the universe and its own models of means-ends relations;⁴ the group consists of a number of such interests⁵, and the public agency is motivated to help solve the common problem that these interests perceive.⁶

While it is entirely possible that some of the actors perceive means-ends relations to exist which in fact do not exist or that some of them believe certain means-ends relations do not exist when in fact

⁴ This is part of Observation #1 (Section B, Chapter I).

⁵ This is the essence of Observation #2 (Section B2, Chapter I).

⁶ As we have mentioned elsewhere, not every public agency is motivated thus, but we have chosen to deal with the problem which arises when a public agency has no hidden agenda; see Assertion #1 (Section B3, Chapter I).

they do exist, which are perceived by others, - one thing is certain; each interest has to understand the decision-making process and particularly the public agency's role in it, from the perspective of his own peculiar view of the universe if he is to cooperate with the agency. The only alternative for an actor's understanding of the process is an actor's believing and trusting the public agency.

The readily substantiated, but unexpressed, principle here is that actors on the whole do not trust black boxes. Unless enough actors understand and believe in the process by which the collective preference ordering is being generated, they'll see to it that no⁷ alternatives get implemented.

Decision-process criterion #1:

All of the group members must either be able to understand the decision-making process and the public agency's role in it, or they must believe and trust the public agency enough that they are willing to take the agency's word for what it is doing.

⁷ In fact Aronowitz traces the current unwillingness of the public to delegate its prerogative to anyone, evident in the upsurge of community control, to its ideal: the "mass democracy" of the French Revolution.

Stanley Aronowitz "The Dialectics of Community Control", Social Policy, May/June, 19, 1970.

See also: Michael Lipsky "Toward a Street-Level Bureaucracy", a paper presented at the Annual Meeting of the American Political Science Association, September 1969, N.Y., N.Y.

Robert C. Seaver "The Dilemma of Critzen Participation" in Citizen Participation in Urban Development: Volume I, Concepts & Issues (Washington, D.C.: Center for Community Affairs, NTL Institute for Applied Behavioral Science, 1968) argues that if the play actors do not share-or at least understand- the public agency's rationale for a particular decision, they tend to be opposed to it because they did not have a chance to participate in the decision rather than because they disagree about the merits of the choice. Having a decision made for a group via a linear scoring function is rather far removed from direct participation. See other participation issues in IIIC.

We can extrapolate more specific criteria from this very basic truism by looking at the meaning of this criterion in our basic context, namely in the case of public decision-making in a pluralistic, North-American setting, during the 1970s.⁸

II.A.1 Perceptions

An actor's perception of reality is reality - for him. Thus, actors act on the basis of their perceptions of reality - not on the basis of absolute reality. All of the decision-making elements that an actor deals with are subject to this: he perceives the range of feasible alternatives, the impacts of each alternative and their distribution, the goals and roles of other actors, his and their relative powers, etc.

Without fully understanding how and why actors' perceptions change, we know that they are influenced by a great number of phenomena and are static. Some actors who understand this try to influence other actors' behavior by influencing each others perceptions-even each other's perceptions of each other's perceptions...

⁸ This same basic criterion would have quite different implications if applied in a context with a different political philosophy. For example, in a society with a doctrinaire approach to determining social issues, (See Section A of Chapter III) "understandability and believability" would have to refer to the understandability and believability of the decision-process and the public agency's activities in terms of the particular doctrine rather than in terms of the ad hoc perceptions of the group's members.

Observation #3:

Actors act on the basis of perceptions. For any individual actor there is no abstract reality apart from perceived reality.

II.A.2 Definition of the problem, the common purpose

How does the problem, the solution of which constitutes the group's common purpose, get defined?

We began to describe the nature of the public agency's responsibility by assuming that a number of interests believe they have a collective choice to make and thus they engage some professionals to act as a public agent or agency.⁹ To paraphrase this: individual interests perceive the existence of a problem which they believe ought to be solved by choosing a collective course of action. Once the public agency is on the scene, it may well examine the problem and find that the group is not really addressing the proper issues. If this happens, the agency has to convince the lay actors - i.e. the group - that they ought to define the problem differently; the agency cannot address a problem which its client group does not perceive to be a problem.

Assertion #2:

The public agency can contribute to the lay actors' definition of the problem, but the lay actors have the last word and thus, in the end, it is their definition of the problem that counts. The public agency cannot legitimately work on a problem for very long if the group does not perceive a problem to exist.

⁹ See Section B3, Chapter I.

II.A.3 Membership in the group or community

Who is, and who is not a member of the group of interests which is relevant to the purpose of a particular group decision-making effort?

Any interest whose values are in any way impacted by one of the possible courses of action is, by definition,¹⁰ a member of the group. The problem of identifying all the members of the group thus translates into the problem of identifying all interests whose values are (potentially) impacted.

Based on Observation #3, and Assertion #2, both of which were developed as part of this same section, we are compelled to propose that if an interest believes to be impacted, it is impacted. There are just two exceptions to this rule; one is an inclusive, the other an exclusive, exception. First, if an actor,¹¹ feels that some interest - other than the one he represents - is impacted even though the interest in question does not perceive this, then that interest should also be considered a member of the group - unless the actor can be persuaded that his perception is erroneous, i.e. that the

¹⁰ By the definition of a "group or community," (See Section B2, Chapter I).

¹¹ This actor can be a lay actor, or it can be the public agency actor.

interest in question really is not impacted.¹² Second, if an interest perceives that it is potentially impacted and should therefore be a member, but it is persuaded by others that this perception is erroneous, i.e. that in fact its values will not be impacted, then that interest should not be a member.

Assertion #3:

If an interest either perceives itself to be impacted by a course of action, or if some other actor believes the interest in question to be potentially impacted, then that interest should, for all intents and purposes,¹³ be considered a member of the relevant group.

II.A.4 Independence from "irrelevant" alternatives

Imagine an actor who perceives a set of feasible alternatives; he establishes a preference ordering over these alternatives and therefore can identify one alternative as his first choice. Imagine the actor now adds a new alternative to his set. He now ranks the alternatives in the expanded set and comes up with a first choice.

¹² Actually, the group consisting of those members who feel they really ought to be members, may have to settle the issue of including members who, themselves, feel they should not be members. The process for settling issues of this nature, i.e. high-level issues, is discussed in Chapters V and VI under "meta-process". (See particularly Section B2, Chapter V; and Section C, Chapter VI.)

¹³ See the exceptions above.

The condition of "independence from irrelevant alternatives" requires that his first choice from the expanded set has to be the same as the first choice from the original set unless the new alternative itself is the new first choice.¹⁴

This is an important concept which is usually assumed to be one of the pre-conditions to having a rational decision-making process.

In a group where each actor realizes that the collective choice depends not only on his own choice but also on the choices of all other actors, an actor very often will work toward getting a particular collective choice while he actually is willing to settle for a compromise solution which falls, in his eyes, somewhat short of his first choice. To get as close to his first choice as he deems is feasible, he may go to the extreme of opting overtly for a different alternative than he is willing to "compromise down to".

The introduction of a new alternative may drastically change the perceived range of possible compromise settlements. And the actor may, consequently, decide to stop holding out to prevent a possible "bad" compromise settlement; or he may do the obverse by deciding to hold out much longer. In either case, he may change his overt first choice as a result of the introduction of a new alternative, - without necessarily choosing the new alternative.

¹⁴ Speaking of the first choice, the new alternative is said to be irrelevant if it does not affect the first choice unless it, itself, becomes the new first choice.

Thus, if we admit the concept of reality for individual actors to consist of their perception of reality, we cannot accommodate the notion of an irrelevant alternative. Actors' perceptions, including the perception of a change in the range of possible alternatives, may affect their choice - without necessarily making their choice fall on the newly introduced alternative.¹⁵

Observation #4:

We cannot assume that preference orderings are independent from "irrelevant" alternatives.

II.A.5 Conceptual Compensation

Some writers in social welfare theory argue along the following lines: imagine a state of affairs different from the current one. Imagine that enough of the actors in the groups are sufficiently better off in the new state so that:

- 1) they can pay for all of the direct efforts necessary to get the group into the new state,
- 2) they can compensate all actors who might find themselves worse off in the new state than they were in the original state, and
- 3) they still have some net benefits left over

We then would have to call the new state a better state than the original state.

¹⁵ Arnstein argues the point well that actors' expressed needs are very much constrained by the options they think are available to them. Their expressed first choice might be replaced by quite a different alternative if they perceived the range of feasible alternatives to be greater. Sherry R. Arnstein "A Ladder of Citizen Participation" JAIP July 1969; p. 216-224.

They argue next that, the new state is a better state than the first even if the compensation payments to actors who get hurt in going from the original state to the new state are not made. They are willing to call the second state a better one since, if payments were made, there still would be a surplus of net benefits; i.e. they make conceptual - rather than actual - compensation payments.¹⁶ They require that compensation payments be at least conceptually possible; but they do not require actual compensation. The decision-process criterion of "Understandability and believability" requires that interests who are negatively impacted by a collective course of action understand and believe - i.e. that they actually feel - that their individual suffering actually is overcome and therefore justified, by the collective benefits of the course of action, i.e. by the positive impacts on other interests. Because we are not working in a vacuum but in the context of contemporary American society, it is hardly an assertion, and we shall therefore label it an observation, that individual interests - on the whole - do not feel that suffering on their part can be justified by a resulting windfall to others.

Observation #5:

Conceptual compensation cannot be used as a substitute for actual compensation.

¹⁶ The names that are normally associated with justifying and defending the notion of conceptual compensation are Kaldor and Hicks.

II.B: Identification of applied values

Each interest has a set of values of its own,¹⁷ and thus each actor who participates in the group decision-making, with the exception of the public agency actor,¹⁸ brings a different set of values to bear on the evaluation of alternative courses of action and their predicted respective impacts. The question now arises: whose values should be brought to bear on the many points in the stream of activities associated with searching for, developing, and choosing a course of action? There is no question that value - laden decisions have to be made throughout the decision-making process - not just at the end when a choice between alternatives is made.

Decision -process criterion #2:

Value laden decisions are made throughout the process, but whenever values are brought to bear, it has to be clear to all whose values they are.

We recognize, and thus do not deny, that the public agency cannot proceed for very long without making some value-laden decisions; we only require the agency to make all of its value assumptions known to the group membership so that the group members have a chance to police these assumptions. This criterion can be translated, for our general contemporary context, into three more specific criteria.

¹⁷ This is part of Observation #1 (See Section B, Chapter I).

¹⁸ This is a direct consequence of Assertion #1 (See Section B3, Chapter I).

II.B.1 Sovereignty of individual values

Assertion #4:

Within the limits of the group's cultural values,
each interest's values are sovereign.

Provided an individual interest's values do not violate the group's cultural values, we cannot judge the set of values of one individual interest as "right" and that of another as "wrong", or one set as being "better" than other set.¹⁹

II.B.2 The ultimate evaluator

Limiting ourselves to the context of collective public decision-making in the United States, in the second half of the twentieth century, we must come to terms with the reality that there is no ultimate evaluator - with the possible exception of the value system(s) of the relevant pluralistic public itself.

Observation #6:

There is no higher authority, no ultimate set of values, and therefore no ultimate evaluator - short of the group of actors itself and the values they will hold with the benefit of hindsight.²⁰

¹⁹ There is a further discussion of this principle in Chapter IV, under the discussion of the theological part of the goal fabric. (See Section C2, Chapter IV).

²⁰ The notion of the group's own value system-with the benefit of hindsight - suggests a conceptual construct which could pass the test of not violating actors' sovereign individual values. To sketch out this oracle, imagine the following: (cont'd.)

II.B.3 Comparison of Utilities

The concept of utility²¹ provides the means for dealing quantitatively with an interest's values. We must assume that each interest has more than one value - or "thing"²² that he values. He has a whole system of values, and a good portion of the work involved in national decision-making, i.e. in bringing his system of values to bear on the development and choice of a course of action, consists of sorting out his relative preferences for the various things he values.

20 (cont'd.)

- 1) The group makes some value-laden choice,
- 2) Enough time elapses to:
 - a) settle all uncertainties which can ever get settled,
 - b) allow any passion, arising from the controversy surrounding the decision, to dissipate and to be displaced by dispassionate reflection.
- 3) But do not allow so much time to elapse as to let the current values lose their meaning, or to let the actor's interest shift completely from the issue.

The scenario which this (future) public would write of the decision in question - and how it would evaluate the decision - constitutes the oracle. There is one exception to the applicability of the concept. It can only be used on relatively small issues. If the question is so large to affect the makeup of the public which will constitute the oracle to the point of selecting its membership, the concept can't be applied. For example, the concept should not be applied to determine the wisdom of a choice made by a national ruler about the desired ethnic make-up of his nation's population. The concept can, however, be applied to determine the wisdom of decisions such as the allocation of resources to competing transportation systems.

²¹ For an in-depth discussion of the concept of utility, see John Van Neumann and Oskar Morgenstern, Theory of Games and Economic Behavior, (New York: John Wiley & Sons, 1964) particularly Section 3 of Chapter I.

²² There is much more discussion of this in Section A of Chapter IV.

Von Neumann-Morgenstern utility provides a one-dimensional scale for measuring an interest's subjective preferences. The job of constructing a sequence of choices, and of asking an interest to use his subjective preferences in making choices, is called "constructing the utility function" for the interest in question. The utility function, usually expressed by a graph, shows the interest's relative preference - i.e. utility - for a particular thing as a function of some variable, usually the amount of that thing. For example, an interest's utility function ought to tell us whether he has twice as much use for - or utility - for \$1,000 as he has for \$500; it may be that he has three times as much or, on the other hand, only slightly more utility for the larger amount. The interest has to make comparisons of many different relative preferences he has for a wide range of possible outcomes. Since all of the comparisons deal only with one interest's relative preferences for different outcomes as perceived from his point of view, they all are intra-personal comparisons.

To make inter-personal comparisons of utilities is quite another matter; these comparisons deal, for example, with such issues as: is the loss of \$1,000 for one interest of as much dis-utility to him as it is to another? Obviously, what is necessary is a transformation of one interest's utility function into the scale of another interest. This requires two things: 1) that a bench-mark be established by mapping one point of one interest's utility function onto the utility function of another interest and 2) that we find the constants of transformation.²³

²³ See also the discussion on utilities under voting schemes in Section B of Chapter III.

While the notion of interpersonal comparison of utilities, which is a basic requisite to social welfare functions and to scoring functions, is not entirely unreasonable, its acceptance in an implementation-oriented decision-making model, as is pursued here, is not advisable. It would at best lead to inherently calloused quantification practices, and at worst, to the despotic imposition of the technicians' values on the public.

Making interpersonal comparisons of utilities by a mathematical means, e.g. by calculating common benchmarks in different actors' utility functions and then deriving the constants of transformation for making the different utilities comparable, does not lend itself to comprehension by all the members of a group or community. The man in the street cannot be expected to understand such transformations to the point where he is willing to live with their consequences, nor can he be expected to believe in the efficacy of these transformations to accept their consequences.

The making of a choice among mutually exclusive alternatives may nevertheless require that interpersonal comparisons are, in fact, made - if not explicitly acknowledged. Our rejection of the concept means that they have to be negotiated.²⁴

²⁴ Bauer argues that negotiation underlies all "policy processes" (his label for the problem which this theses deals with) even though the actual negotiation may be camouflaged. Raymond Bauer "The Strategy of Policy Formation: An Introduction" in The Study of Policy Formation (New York: The Free Press, 1968) reviewed; J.AIP. May 1969, p. 208.

Observation #7:

There is no objective, practical way for making inter-personal comparisons of utilities; they have to be negotiated.

IIC. Role of the group's cultural values

As was mentioned in Chapter I,²⁵ there is some overlap of all the group members' individual value systems; this overlap constitutes a set of shared values, the group's cultural values. If a group should find that it has no shared values, it will discover, however, that it has the capacity to develop a set of shared values in the process of working for the group's common purpose.

Observation #8

In the process of working out conflicts that arise while striving to achieve a common purpose, every group develops and uses a body of shared values; if it already has such a body of cultural values, the group uses it and amends it.²⁶

In light of the fact that we have rejected²⁷ the notion of an ultimate set of values against which alternatives and their predicted consequences can be evaluated, we have to define carefully the role of the cultural values. While the cultural values play a very important role, they cannot be used to evaluate alternatives - at least in our

²⁵ See Section B2, Chapter I

²⁶ This states, in essence, that the set of cultural values is not an empty set for very long with any group.

²⁷ See Section B2 above, in this Chapter: Ultimate evaluator

society and, in fact, not in most societies - because they do not contain the kind of detail that would lend itself to determine the relative goodness of different alternatives. A group's set of cultural values contains information about the group's sense of fairness, justice, equity, and propriety. The group agrees - explicitly or tacitly - on parameters which define what it understands under the concepts of fairness, justice, equity and propriety. A change in the group's cultural values is best seen as a change in some of these parameters.

Decision-process criterion #3:

The group's cultural values provide the envelope for all public agency activity; parameters of fairness, justice, equity and propriety constitute bounds for the decision-making process in general and for the public agency's activities in particular; they also constitute the constraints within which alternative courses of action have to be developed.

This general criterion gives rise to several more specific criteria:

II.C.1 Evaluation of the decision-process

Assertion #5:

The group has to be able to review the decision-making process, the public agency's activities, and the range of alternatives, and to evaluate the process in terms of its shared sense of fairness, justice, equity and propriety.

II.C.2 Compassion

Assertion #6:

The group decision-making process has to be able to group respond to cultural values which stress the qualitative difference of impacts among courses of action; the process has to be capable of compassion.

II.C.3 Equality

The various actors that are involved one way or another in group decision-making represent a wide variety of interests; not only do they pursue different goals for different values, they also bring different resources to the task. The actors' status in the group²⁸ vary and so do their powers to influence the development and the choice of a course of action.²⁹

²⁸ The perceived legitimacy of an actor, and thus his status, is a function of 1) the compatibility of his values with the group's cultural values, 2) his status vis-a-vis the predominant concepts of fairness, which stem from the group's meta-laws, such as a constitution; 3) his breadth of interests, and 4) the length of time he has been on the scene and can be expected to remain on the scene.

See a good discussion of this in... Public and Private Decisions pp. 125-126.

²⁹ Wolfinger argues that not only do actors have different amounts of influence but that their power also varies greatly with the issue at hand. He suggests a model of "specialized leadership" i.e. issue-dependent leadership rather than a model based on the concept of general leadership and power. Wolfinger, Raymond E. "Reputation and Reality in the Study of 'Community power'", American Sociological Review, XXV (1960), pp. 636-644.

Observation #9:

Actors are not equal.

II.C.4 Un-represented Interests

We consider an interest to be part of the group because it may be affected by one or more of the contemplated courses of action.³⁰ Since the collective decision-making process depends on each interest being represented in the process by an actor, the public agency has to find actors for un-represented interests and, as a last resort, act as their representatives.³¹

Assertion #7:

The public agency actor has to become the advocate for any potentially impacted interest not represented by an actor in the group.

³⁰ See Section 43, above, in this Chapter: Membership in the group or community; particularly Assertion #3.

³¹ For example, Long writing of the decision-making in the New York Port Authority, points out that there are interests, e.g. the "metropolitan interest", which are not well represented in the decision-making process because there are no actors whose job it is to represent these interests. "Apart from the newspaper editorial, the occasional politician, and a few civic leaders, the general business of the metropolitan area is scarcely anybody's business, and, except for a few, those who concern themselves with the general problems are pursuing hobbies and causes rather than their own business." (my emphasis) Long, Norton. "The Local Community as an Ecology of Games", American Journal of Sociology, LXIV (1958), pp. 251-261.

IID. Adaptability

Time is a ubiquitous variable; all other variables - individual interests' values,³² the group's membership, the common purpose or problem, actors' perceptions, the range of alternatives, the perceptions of the process, etc.³³ -vary with time . This is not to say, however, that these variables change because time elapses but rather that they change as time elapses. If we thus picture a very dynamic process with many decision-variables interacting and affecting each other, we are closer to a realistic model of how group decisions get made than if we picture a unidirectional-though maybe iterative-process as is adequate for individual decision-making.³⁴

³² "That values are changing, that they are in conflict, and that they are altogether precarious is now and has been for some time a part of the general consciousness of the age". Abraham Kaplan, The Conduct of Inquiry, (San Francisco: Chandler Publishing Co., 1964), p. 370.

³³ The possibility of changes in these and other variables has been allowed by the already stated observations and assertions; see;

- interests' values: Observation #1
- the group's membership: Observation #2 and Assertion #3
- common purpose or problem: Assertion #2
- actors' perceptions: Observations #3 and #8
- the range of alternatives: Observation #4
- the perception of the process: Assertion #5

³⁴ We introduce such a simple, though useful, model of individual decision-making in Chapter IV. See "A prototype individual decision-making process."

Observation #10:

Time changes everything.

Since process and events are the key elements in the time-stream of decision-making, conventional clock and calendar time appears rather arbitrary in comparison. More relevant time elements can be developed for managing the group decision-making process.³⁵

Decision-process Criterion #4:

Changes that occur over time have to be accommodated, and the decision process has to adapt itself to these changes.

II.D.1 Decision variables and the set of alternatives

The interests' value systems, their different views of the universe, the group's make-up, even the common purpose- all are variables that can change over time. One consequence is that the alternative courses of action that are being considered by the various actors is an open set; it may be enlarged at any time, by any actor. It is also possible that some actors are including only part of the set in their own set of alternatives either because of ignorance or because they consider some of the courses of action contemplated by other actors to be feasible.

³⁵ John Dyckman discusses, and succinctly demonstrates, what kind of time units may have more meaning than the conventional (arbitrary) equi-length units we normally think of. John W. Dyckman "...Of Time and The Plan". J.A.I.P., XXVIII, May 1962, pp. 141-153.

The null-alternative (i.e. do nothing) is always a member of the set of possible courses of action whether it is listed explicitly or not. It gains its special status from the fact that if the group does not reach enough of an agreement to implement any of the other alternatives, the group cannot do anything - which means it has chosen the null-alternative by default.

Observation #11:

The set of alternative courses of action being considered can never be assumed to be a closed set, and the null-alternative is always a member.

II.D.2 Process sequence

Conditions change as the decision-making process progresses, and new information becomes available.

Not only can't we assume that the process will unfold smoothly, without surprises, but, as new developments arise, we might want to back up, re-cycle, or start over. This kind of flexibility is desirable in a group decision-making process. The public agency, as well as other actors, may want to reconsider earlier decisions in the light of new perceptions, changed values, or because of changes in other decision variables.

Assertion #8:

The decision-making process has to be flexible enough to permit backing up, re-cycling, starting over, and making other kinds of changes.

IIE: Summary

The group decision-making process and therefore the public agency's activities, have to be rational - not in some abstract, academic, and esoteric sense of "rational" - but in the sense that the community of interests on whose behalf the public agency works perceives rational decision-making. The group has to understand what is going on. Activities of the public agency which are too technical for the group to understand are irrelevant unless the group believes- and in this sense trusts the agency - that these activities actually accomplish what they purport to accomplish.

Computer simulation of traffic flow over alternative networks of streets and highways is a case in point; only if the public which is potentially affected by any of the contemplated networks understands - or, more likely, believes in the efficacy of the traffic predictions stemming from a computer simulation - should the public agency use the information from such a simulation.

Requiring the decision-making process to be understandable and believable gives the various potentially affected interests' perceptions a very crucial role:

- it is their perception of the problem which defines the group's common purpose;
- it is their perception of alternative impacts which determines who is a member of the relevant public; i.e. of the group or community of interests;

- it is their perception of the feasible range of options which affects their expressed preferences;
- it is their perception of impacts which determines what kinds of compensation has to be incorporated into the alternatives.

Value-laden decisions are made throughout the decision-making process. Since the public agency works on the behalf of a pluralistic community of interests with disparate value systems, and since there is no ultimate system of values that the agency can apply, it needs to make very clear whose values are being applied whenever a value-decision is made. The individual interests' diverse values systems are - within the limits of the group's cultural values - sovereign.

The intersection of all interests' sets of values constitute the group's cultural values; if a group finds it has no such shared values, it acquires them in the process of working together. These cultural values typically define primarily the group's concepts of fairness, justice, equity and propriety, and these concepts - in turn - constitute the parameters within which the decision-making process as well as the constraints on the range of alternatives have to be found.

The whole decision-making process, as well as several decision-making variables - such as the interests' values, the actors' perceptions, the set of alternatives, etc. - has to be able to adapt to the kinds of changes that occur over time. The decision-making

strategy to be developed has to be sufficiently flexible to tell the public agency what it ought to do next, no matter how drastic the changes are that some of the variables have undergone.

Memo to: Thesis Committee
from: Hans Bleiker
Date: September 13, 1971
subject: Thesis revisions

I feel that the four changes that were outlined in Professor Manheim's memo of July 29 have been made:

1) Bringing out the operational implications of my normative theory:

I have added an abstract of each chapter to the front of each chapter and a summary to the end of each chapter. Note, however, that Chapters VII, VIII, IX, as well as the entire Appendices A and B deal exclusively with the operational implications of my normative theory.

2) Strengthening Part A by moving Chapter IV to the spot of Chapter II.

While I have updated all of the ten first chapters to some degree, the biggest change has been made by creating a new Chapter II which postulates four basic decision-process criteria drawn from what previously was Chapter IV.

The new Chapter III evaluates existing decision-processes against the four criteria; this is also drawn from what previously was Chapter IV.

The new Chapter IV contains, essentially, what previously was contained in Chapter II and III.

The fact that the proposed strategy does meet the decision-process criteria is the subject of Section D, Chapter VI.

3) Drawing more on the case studies:

The references in Chapter VII have been changed to identify the particular incidences rather than to the entire cases. Even though I have stuck the case studies in the appendix, Chapter VII does not replace them.

Chapters VIII and IX also do, where it is appropriate, draw on the case studies to help illustrate the proposed strategy and its likely effect on the highway location-design process.

In Chapter X the cases are used to help argue the feasibility of the proposed strategy.

4) There were four specific questions dealing with:

a) Realism of a value-free public agency:

I do not propose a value-free agent in absolute terms but one which is value-free relative to the problem (of the group). This issue is touched on in several places; see particularly I.B3 and X.D.

b) Definition of the group:

I have addressed this issue in II.A1. and II.A3.

c) Definition of the problem:

I have addressed this issue in
IA (3rd paragraph)
IC (1st paragraph)
and in II.A1. and II.A2.

d) Differences in political structure:

This is an issue that is dealt with in IC (last two paragraphs) and III.A1. (doctrine).

CHAPTER III

COMPARATIVE EVALUATION OF EXISTING METHODS AND THEORIES

- III.A. Aggregating different preference orderings
 - III.A.1. Definition of the social welfare function
 - III.A.2. Scoring functions
- III.B. Choice processes
 - III.B.1. Voting schemes
 - III.B.2. Other choice processes
- III.C. Theory of comprehensive planning
 - III.C.1. Planning versus prediction
 - III.C.2. The rationality of planning
 - III.C.3. Planners as leaders
 - III.C.4. Conflicts in planning
 - III.C.5. The role of values
 - III.C.6. The concept of the distribution of power
- III.D. Summary

Abstract

Our definition of the problem developed in Chapter I - namely that the public agency is motivated to help a group of diverse interests with a common purpose find and choose a collective course of action - and the criteria for a decision-process, developed in Chapter II, together describe a problem for the public agency which does not lend itself to resolution by the use of existing group decision-making methods or theories.

Definition of an existing social welfare function is ruled out essentially by the definition of the problem. Scoring functions cannot be used because they would violate a number of decision-process criteria. Voting schemes and other choice processes, with the possible exception of an inherently fair choice process, are handicapped by conflicts that are internal to themselves as well as being in contravention of decision-process criteria. There is no general theory of comprehensive planning that the public agency can resort to, although there are several concepts and ideas in current planning thought which are useful to the agency.

There are essentially two approaches for a group to use to make collective decisions when its members subscribe to different values. First, one can attempt to aggregate the different preference orderings¹ of the various actors into one single, collective preference ordering. Second, one can go through and/or engage the group in a choice process.

Let us look at these approaches with an eye on what is - and what is not - consistent with the specific Observations, Assertions, and the four general Decision-process criteria of Chapter II.

III.A. Aggregating different preference orderings

The concept behind both of the two methods which are part of this approach is that one can take the group members' preference orderings and perform certain operations on them either to collapse them to a single, collective ordering or to produce one collective choice.

III.A.1. Definition of the social welfare function

A social welfare function can be thought of as society's counterpart to the individual interest's preference ordering over perceived alternative courses of action.²

¹ Chapter IV deals in some detail with the process by which each individual interest arrives at its own preference orderings. See particularly Sections A and B of Chapter IV.

² Richard Zeckhauser and Elmer Schaffner, "Public Policy and Normative Economic Theory", in Bauer, Raymond A. and Kenneth J. Gergen, ed., The Study of Policy Formation, (New York: The Free Press, 1968).

Definition: Social welfare function

A group's social welfare function is its preference ordering over the perceived alternative courses of action.

If the public agency could produce or define a social welfare function for a group, its job would be done. It therefore is of great interest to us to know how likely it is that this will happen.

The group can arrive at a social welfare function in just one of two ways: 1) the group subscribes to one single, consistent set of values and all its members have the same view of the universe³, or 2) the various preference orderings of the group members can be operated on by an objective algorithm which then produces a collective preference ordering.

The group's cultural values are not sufficiently specific to provide a social welfare function,⁴ and the individual interests' values which the group does not share are, by definition, disparate. Thus, we have to rule out the first way for finding a social welfare function immediately because, as we have defined "individual interest"⁵ and

³ Both of these concepts, individual value and view of the universe, are crucial concepts in the definition of an individual interest (see Section B1, Chapter I) and in the development of a rationale for individual decision-making expressed in Observation #1 (see Section B, Chapter I).

⁴ See definition of cultural values in Section B2, Chapter I.

⁵ See definition in Section B1 of Chapter I.

"group"⁶, a "group" which would meet these requirements would constitute an individual interest and not a group.⁷

The second way of identifying a social welfare function for the group cannot be dismissed as summarily.

We might view all of the group members' preference orderings as a system of preference orderings which can be solved for a correct preference ordering - in the sense that a system of N linear equations in M unknowns can be solved. We have to be sure, however, that anything

⁶ See definition in Section B2 of Chapter I.

⁷ This is no little matter; the pluralistic nature of groups is the very heart of the problem, and we must not violate this nature for convenience' sake. Norton Long's model of the community as an ecology of games is provocative not so much because it is a clever way to model actors' relationships in the group, but because it gives us such a compelling view of how each interest must perceive his position in the group. See Long, Norton, "The Local Community as an Ecology of Games", American Journal of Sociology, LXIV (1958), 251-261. Any decision-making model we might build has to be compatible with his model.

In 1965 Davidoff provided the city planning profession a model of the community's pluralistic nature that struck home. See Davidoff, Paul, "Advocacy and Pluralism in Planning," Journal of American Institute of Planners, XXI (Nov. 1965) 331-338. Virtually all planners now recognize the validity of the concept of a heterogeneous public, and many planners have in fact become advocates for specific interests. Descriptive community decision-making studies have also been suggesting more of a pluralistic model than was thought appropriate a decade ago. Polsby, for instance, defines the "pluralist" approach to community decision-making as one which does not presuppose that anything categorical can be said about the way in which a community goes about making decisions. A researcher with a disposition toward a pluralist model will not ask the loaded question "Who runs this town?" but rather "How do decisions get made in this town?" See Polsby, Nelson W., Community Power Structure and Political Theory, (New Haven: Yale U. Press, 1963).

we do along this approach satisfies the decision-process criteria, particularly criteria #1 and #2,⁸ dealing with understandability of the process and identification of applied values, respectively. One way we can study the possibility of finding a social welfare function is to ask: assuming we made a choice of a course of action based on our knowledge of what the group's social welfare function is, how could we ever determine that the resulting choice is correct - i.e. that it conforms to the group's social welfare function?

Conflicts between actors' values would remain⁹, because according to Decision-process criterion #2, we cannot expect them to subscribe to a higher order of values¹⁰ than their own. At the same time the public agency is not to have a value system apart from the group members¹¹. We thus cannot look to the agency to have the key to determine whether a particular choice is consistent with the group's social welfare function. Therefore, unless we can find an algorithm which does not depend on a value system but which operates completely objectively, we cannot possibly define a social welfare function and remain consistent with the observations and assertions developed in the first two Chapters.

⁸ See Sections A and B respectively, of Chapter II, for these two criteria.

⁹ See Observation #2 in Section B2, Chapter I.

¹⁰ See Assertion #4 in Section B1 of Chapter II.

¹¹ This does not mean that he does not subscribe to the group's cultural values. Note that the cultural values are not a set of values apart from an individual interest's values; they are the set of individual values which are shared by all of them. (See Assertion #1 in Section B3, Chapter I, and the definition of cultural values in Section B2, Chapter I).

There are essentially three approaches which, in fact, do not constitute objective algorithms, but which nevertheless might come to mind as being objective algorithms.

First, we might be intrigued by our ability to quantify preferences and a great number of other decision variables, and by our ability to perform mathematical operations on, and with, these quantified variables. We shall cover this approach to identifying a group's social welfare function in a separate section, Section A2 of this Chapter.

Second, we might take the approach of saying: let the members of the group vote - by the most appropriate voting scheme - and let them thus identify what their collective preferences are. We shall deal with voting schemes in Section B1 of this Chapter, as part of the discussion of "choice processes".

Third, we might argue that, the disparity of values notwithstanding, the members of the group could, conceivably, subscribe to the same view of the universe and that this particular view might, conceivably, be a very compelling view of the universe. When a group subscribes to one single and very compelling view of the universe, we say that the group subscribes to a doctrine.

Definition: Doctrine

A doctrine consists of a view of the universe which:

- 1) is subscribed to by all members of a group, and
- 2) determines all, or most, of each subscribing actor's perceptions of means-ends relations.

Only where the actors who represent the various interests of the group happened to subscribe to some powerful doctrine¹², would the public

¹² The "powerfulness" of a doctrine is a measure of the completeness

agency have a mechanism available for establishing a "correct" preference ordering.

Thus, if we can successfully argue that the assumption of agreement among the group's actors on a doctrine is inconsistent with our earlier assumptions, then we can conclude that the existence of a social welfare function is also inconsistent with our earlier assumptions.

Decision-process criterion #2¹³, dealing with the identification of applied values, would be violated if we assumed agreement on a doctrine¹⁴ among the members of the group who, by definition, represent different interests with disparate value systems. This is essentially, what we said by asserting the sovereignty of the individual interest's value system¹⁵ and by observing that the group does not recognize an ultimate, higher set of values.¹⁶

The only reason someone might be led to believe that the group's acceptance of a doctrine is not inconsistent with Decision-process

with which it determines actors' perceived fabrics of means-ends relations. While we have accepted the notion that a group shares some values, i.e. its cultural values, these shared values are seen as a relatively small set of values dealing mainly with the group members' sense of fairness, justice, equity and propriety. Each actor still has considerable latitude in his formation of a perceived fabric of means-ends relations (See Section A, Chapter IV, goal fabric). In fact, the chief characteristic of an actor's perceived fabric of means-ends relations is seen to be his particular set of values and his view of the universe.

The characteristic of the perceived fabrics of means-ends relations of a group which subscribes to a doctrine is that all these fabrics are attempts to be as nearly as possible exactly like the fabric of means-ends relations which can be deduced from the doctrine; they constitute approximations of the doctrine.

¹³ See Section B, Chapter II.

¹⁴ As defined above.

¹⁵ This was done in Assertion #4; see Decision-process criterion #2, in Section B1 of Chapter II.

criterion #2 is that one might mistake the doctrine's implicit value system for the sharing of a particularly compelling view of the universe.¹⁷

If it can be said at all that our (U.S.) society accepts one perceived fabric of means-ends relations as the right view of the universe for society, it is the network of nodes and links which results from following a doctrine of "maximizing" the effectiveness of the monetary resources expended. A whole science of developing specific rationales for making this dollar-oriented doctrine operational exists. It turns out, however, that this is largely a managerial science, addressing the problem of achieving as many of some given set of goals as possible with the available resources; it is totally incapable of generating high order goals, and in the final analysis it cannot really function as a doctrine. In fact, any maximizing or optimizing scheme rests on the notion that some preference ordering can be established as the 'correct' preference ordering - by virtue of being Pareto optimal to all other orderings,¹⁸ - and according to which the choice is optimized.¹⁹ Benefit-cost analysis,

¹⁶ This was done in Observation #6, also in the discussion of Decision-process Criterion #2. See Section B2, Chapter II.

¹⁷ This appears to happen, for example, when a public agency proceeds on the basis that the community for which it works shares the view (actually a doctrine) that economic resources are to be maximized.

Because even our modern society is neither strictly secular nor completely democratic, it is not infrequent that contemporary public policy-making in the United States is carried out under a doctrinaire rationale. Having an actor subscribe to a doctrine is tantamount to changing his entire conceptual framework for making decisions based on his values and on his view of the universe, to a framework which depends only on his view of the universe, which is - in fact - the shared doctrinaire fabric of means-ends relations.

¹⁸ For a discussion of the Pareto criterion see the "Inadequacy of the Pareto Criterion for Government Decisions", in Public Policy and Normative Economic Theory, op. cit.

cost-effectiveness analysis, and marginal analysis, are examples of such rationales. They are best viewed as useful tools for helping a decision-maker choose between actions for satisfying his values than as a method for choosing between actors' values.²⁰

While such decision-making tools can help an individual actor develop his goal structure and remain consistent with his top goals, they cannot do it for a group of actors, i.e. for society. These tools thus cannot produce a social welfare function.

There are other, rather fundamental reasons why it is questionable that there is any process at all by which a social welfare function can be

¹⁹ See Raymond Bauer, *ibid.*

²⁰ Lichfield has carried the benefit-cost concept probably further than anyone else in planning. However, his argument for a benefit-cost approach to planning necessarily presumes that the planner can assess the impacts of an alternative on the various actors' values.

Nathan Lichfield, "Cost Benefit Analysis in City Planning", J.A.I.P., XXVI, November 1960.

Hill points out some of the limitations of conventional benefit-cost analysis and of Lichfield's extension of the concept, the "balance sheet of development".

The primary limitation is the fact that costs and benefits can only be compared in terms of a specific objective which, in turn, has to have meaning for all of the actors; Assertion #4 and Observations #1 and #2 prevent us from assuming that actors share the same goals. (See Section B1, Chapter II; Sections B and B2 of Chapter I, respectively.) Hill's method brings out the fact that the aggregate magnitude of the net impacts is not enough information to evaluate an alternative, that the incidence of the impacts is equally important. He also recognizes the importance of taking impacts into account which do not yield to translation into monetary units - or which cannot be quantified at all. He does, however, require the planner to establish numerical weights for 1) the incidence of impacts which is tantamount to weighting actors, and 2) the objectives; this, because he still deals with a "decision-maker".

Morris Hill, "A Goals-Achievement Matrix for Evaluating Alternative Plans", Journal of the American Institute of Planners, XXXIV, Jan. 1968). For a discussion of "marginal analysis" - an exploration of what effects the expenditure of an additional dollar could have on ameliorating various impacts - see William J. Baumol, Economic Theory and Operations Analysis, (Englewood Cliffs, N.J.; Prentice-Hall, 1961), Chapter III.

defined for a group with disparate preference orderings. Kenneth Arrow has demonstrated that we cannot count on producing a social welfare function if the group has three or more alternatives that it ranks, without violating at least some of a set of very reasonable conditions.²¹

Provided groups are aware of the fact that adoption of a very compelling rationale actually amounts to adoption of a doctrine, few groups will let the public agency use such a rationale. To make sure that a group's individual preference orderings are not unknowingly subjected to a doctrinaire aggregation process, the public agency must take great pains in making known the assumptions which are implicit in any aggregation algorithm they are using.²²

²¹ His rules concern: 1) interpersonal comparison of utilities, 2) ordering of social states, 3) positive association of social and individual values, 4) independence from irrelevant alternatives, 5) citizen sovereignty, and 5) compensation. Kenneth J. Arrow, Social Choice and Individual Values, (N.Y.: John Wiley & Sons, Inc., 1951). See particularly his "General Possibility Theorem", axiom 1, axiom 2, condition 1, and condition 2 which, in the Second Edition, are on pages 59, 13, 13, 24 and 26 respectively.

²² Gunnar Myrdal defines having a bias as being "directed by unacknowledged values". The admonishment to the public agency to take special pains to make any implicit, i.e. hidden, assumptions known to the public, is an admonishment not to be guilty of bias.

Gunnar Myrdal, Value in Social Theory, (N.Y. Harper, 1958), p. 52. Kaplan defines bias thus: "What constitutes bias is that the will to believe is motivated by interests external to the context of inquiry itself... Bias, then is not constituted by merely having motives, that is, by subscribing to values which are somehow involved in the scientific situation".

Kaplan points out that one of the most pervasive ways bias gets into scientific work is in the selection of the problem; obviously this holds also for the public agency's role in defining problems for the group.

Abraham Kaplan, The Conduct of Inquiry, (San Francisco; Chandler Publishing Co., 1964), pp. 374-376.

See also Lipsky on this issue:

Decision-process criterion #2, then, in effect rules out the acceptance of a shared doctrine by actors representing interests with disparate value systems, and we must conclude that the public agency's task of helping the group find and choose a course of action does not consist of identifying the group's social welfare function.²³

III A2: Scoring functions

As was mentioned above,²⁴ the use of a scoring function is an attempt to define a group's social welfare function by quantifying an alternative's impacts on the individual interest's values and aggregating them for the entire group arithmetically. While scoring functions are subject to all the criticism of social welfare function, they deserve our special attention because we are fascinated by the inherent objectivity of arithmetic algorithms and we consequently are vulnerable to the rationale behind scoring functions.

Michael Lipsky, "Towards a Theory of Street-Level Bureaucracy", a paper presented at the Annual Meeting of the American Political Science Association, September 1969, New York, N.Y.

²³ There are instances, of course, where a group - even a whole society - subscribes to a doctrine which either spells out in great detail what all the means-ends relations are, from the highest goals to the most specific alternative courses of action, or which gives relatively few - but very broadly applicable - rules of thumb. An example of the first are the writings of Confucius' disciples; see, for example, Alfred Doebelin, The Living Thoughts of Confucius (Greenwich, Conn.: Fawcett Publications, 1959); an example of the second is Mao's Thoughts. Members of a group which subscribes to a doctrine consult their doctrine - much like an oracle - for advice on choosing the course of action which is, in the doctrinaire sense, correct. In the U.S. the dollar has come closer to playing the role that Mao's writings play in China than any other single element in our decision-making.

²⁴ Section A1 of this Chapter.

Actors are different from each other; they don't all have the same standing in the group, and each one ranks alternative courses of action differently because, most likely, each course of action leads to different impacts for each actor. Scoring functions²⁵ take cognisance of this fact by quantifying these differential impacts and aggregating them into a single number for each alternative.

Given 1) a set of predicted impacts for each of several alternatives,

2) a set of relevant actors for each alternative,

3) a predicted distribution of the impacts among the relevant actors,

4) some measure of the desirability or undesirability of each impact on each actor, e. g. utility,

5) a distribution of weights showing the relative importance of the various types of impacts,

and 6) a distribution of weights showing the relative importance of the various actors, -- then

the scoring function produces a single number, i.e. a score, for each alternative. This is tantamount to producing a collective preference ordering. A linear scoring function does this by first applying the appropriate impact weights and actor weights to each of the predicted impacts for each actor, respectively, and then summing over all impacts and actors for each of the alternatives.

²⁵Essentially the same criticism applies to non-linear scoring functions as is leveled here at linear ones.

Consider, for example, the format of aggregating one particular highway alignment's impacts on all the municipalities along its corridor into one single, numerical score: see figure IV-1.²⁶

Even a linear scoring function simple enough to be carried out with pencil and paper can take account of many more considerations than an intuitive evaluation process, and a computerized linear scoring function can keep track of a number of actors and discrete impacts at least one order of magnitude beyond this.

No matter how complex a linear scoring function becomes, however, it has its severe limitations. Four kinds of problems present themselves:

- the problems of quantification
- assignment of weights
- meaning of final score
- understandability and believability

Quantification

For an impact to be considered it has to be quantified: thus, everything has to be quantified.

While some authorities argue that, if need be, anything can be

²⁶ The author used the figure, as well as much the same line of argument, in a chapter he contributed to a research report by Marvin L. Manheim et al., to the National Cooperative Highway Research Program of the National Academy of Sciences. Urban Systems Laboratory, M.I.T., The Impacts of Highways upon Environmental Values, Phase I Final Report No. USL-69-1, NCHRP Project 8-8 (Cambridge, Mass. March 1969).

quantified,²⁷ the experience has been that, in situations where numbers are needed, one produces those numbers that are readily produceable and ignores the difficult-to-quantify elements. Aesthetic considerations have, for example, been "measured" in linear scoring functions, but these measures have at best been primitive oversimplifications - and more often - intellectual gymnastics.

This very basic quantification problem aside, there are some other questions that suggest themselves:

- Should we measure each actor's own utility²⁸ for the outcome in question, or should we use one "neutral" set of values - as is suggested by figure IV-1?
- When is an impact an impact?
- How are disputes about quantification to be settled?

If we decide to measure each actor's own utility for the alternative in

²⁷ See, for example, Ackoff's argument that "...any qualified property is potentially capable of being expressed quantitatively..."
 Russell L. Ackoff, Scientific Method: Optimizing Applied Research Decisions, (New York: John Wiley & Sons, 1962), p. 20.
 and also: Abraham Kaplan, op. cit.

²⁸ We refer to the Von Neumann-Morgenstern concept of utility. See: William J. Baumol, op. cit., or J. Von Neumann and O. Morgenstern, Theory of Games and Economic Behaviour, (Princeton, Princeton University Press, 1947), particularly Sec. 3, Chapter 1.
 There are, however, some other concepts afoot:
 Churchman and Ackoff have developed an approximate measure of value.
 Russell L. Ackoff, op. cit., pp. 87-95
 and Ackoff describes a measure of subjective value developed by Davidson, Siegel and Suppes:
 Russell L. Ackoff, Ibid., p. 86.

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 Russell L. Ackoff, Ibid., p. 86.

GOAL VARIABLES	Weight W_i	IMPACT x_i	
		Sign	Level
1. CONSTRUCTION COST	.20	-	\$48,700,000
2. RIGHT-OF-WAY COST	.20	-	\$53,200,000
3. USER BENEFITS	.30	+	15 minutes
4. COMMUNITY A. (Total - .02)			
1. Multi-Family Living Units Displaced	.004	-	94
2. Single-Family Living Units Displaced	.002	-	183
3. Employment Change - Jobs Lost Now	.0006	-	170
4. %	.001	-	3
5. Employment Change Over 20 years - Net Gain	.0004	+	300
6. Commercial Land Use Change-Parcels Lost Now	.0012	-	14
7. %	.002	-	0.7
8. Commercial Land Use Change Over 20 Years - Net Gain	.0008	+	20
9. Vacant Land Lost	.001	-	5
10. Park Space Loast, %	.002	-	3
11. Change in Cost of Providing Public Services - Now	.0008	+	\$200,000
12. %	.001	+	1
13. Net Change in Cost of Providing Public Services - 20 Years	.0002	+	\$400,000
14. Tax Base Change - Loss Now	.0006	-	\$1,400,000
15. %	.002	-	0.9
16. Tax Base Change - 20 Years, Net Gain	<u>.0004</u>	+	\$1,800,000
	.02		
5. COMMUNITY B (Total = .03)			
:			
etc....			

Total Score for this alternative, $T = \sum_i W_i X_i$

Hypothetical example of a linear scoring function.

FIGURE III -1

question, we are faced, first, by the gargantuan²⁹ task of eliciting quantifiable preference statements from all actors, and second, we then still have to violate Decision-criterion #2³⁰ to compare the resultant personal utilities. If, on the other hand, we decide that we can use a "neutral" set of values rather than the various interests' own utilities, we must assume the existence of an ultimate set of values. This assumption is also in contravention of Decision-process criterion #2³¹.

Decision-process criterion #1 suggests that only the interest in question can determine whether he is (potentially) affected or not; the public agency cannot make this decision and, thus, cannot construct a scoring function on its own.

The same criterion has to affect the settlement of issues; the public agency has to settle quantification issues not just to its own satisfaction but to the satisfaction of all potentially affected interests.

The main thrust of the Decision-process criteria on the quantification issues of scoring functions is that all value decisions have to be made explicitly and that the whole group of actors must understand what these issues of quantification are. If quantification serves to

²⁹ The enormity of this task does not stem so much from the fact that a lot of information would have to be handled - which is something computers could be used for - but from the fact that it is extremely difficult to obtain realistic, meaningful utility statements from actors.

³⁰ Specifically, we have to violate Observation #7; see Section B3, Chapter II.

³¹ The assumption is in direct contravention of Observation #6; see Decision-process criterion #2, Section B2, Chapter II.

hide value-assumptions and thus provides for unacknowledged value decisions to be made, the decision-making process becomes biased.³²

Weights

Admittedly, any kind of formal distribution of power constitutes a weighting of actors. It is one thing to point out what the power distribution is which exists and has evolved from the political process, and it is quite another thing to assign a particular distribution of weights to a group of actors and propose that this ought to be the distribution. Who has the power to perform this task? This task drips of value-judgements; the public agency actor, as we have defined him, cannot perform it.³³

Meaning of Final Score

How meaningful is the final total score? Particularly, how meaningful is it to the various lay interests who are members of the group? Observations #3, 4 and 5, and Assertions #2 and 3 suggest that

³² Gunnar Myrdal, Value in Social Theory, (N.Y.: Harper, 1958).

³³ Herbert Simon today dismisses as not very good his own reliance on weights in earlier writings.

Herbert A. Simon, Administrative Behaviour, 2nd Edition, (New York: MacMillan Co., 1970).

Martin Rein makes a good classification of the sources of a planner's legitimacy:

- 1) expertise
- 2) bureaucratic position
- 3) consumer preferences

and 4) professional values.

None of these, however, even begin to suggest - or at least "should" not begin to suggest - the kinds of powers that come from the assigning of actor weights.

Martin Rein, "Social Planning: The Search for Legitimacy", J.A.I.P., July 1969.

in most - if not all - public group decision-making contexts the arithmetic aggregation of weighed and quantified impacts violates decision-process criterion #1 on understandability and believability.

These observations and assertions raise the following questions: Does the convenience of having only one number representing the "sum" of all the impacts of each alternative on each actor outweigh the loss of a wealth of information about the necessary tradeoffs between actors? Is it better to let the linear scoring function make tradeoffs implicitly, or would it be better to stop the aggregation process at the point where the actors can usefully indicate their own preferences - i.e. their own scores - and therefore become directly involved in making the tradeoffs?

The very result of a linear scoring function, that is, a single aggregate index taken from a galaxy of different indices, destroys - or at least hides - most of the information the decision-maker could use.

III.B. Choice processes

As difficult as it is to make a collective choice, the actors often cannot escape making one because the alternatives in question are mutually exclusive. Only one of them can be implemented - and when the null-alternative is considered a member of the set of alternative courses of action, the group definitely cannot escape making a choice. If the group can arrive at one collective preference ordering over the entire set of alternatives, the choice is made - provided there is only

one most preferred alternative.³⁴ Even if the group cannot agree on how to rank all the alternatives, they nevertheless may be able to agree on a choice. Since finding the most preferred alternative is the reason for aggregating the preference orderings, it makes sense looking into the feasibility of making a choice without ranking all of the alternatives. Provided all the actors concur, picking the most preferred alternative will fill the bill.

III.B.1 Voting Schemes

A voting scheme might be able to serve as a mechanism to aggregate the individual preference orderings. Having argued that each actor has a certain sovereignty in determining his own goals, and hence his preference orderings, we find the notion of resolving differences between preference orderings by the mechanism of the ballot very attractive; it is in the spirit of a democratic decision-making process. Many voting schemes can be designed to accomplish this.

However, the scheme which is most attractive because of its great simplicity can serve to demonstrate that voting schemes are no panacea for aggregating preferences either.

Assuming that all actors are equal, that each actor has established an ordinal preference ordering, and that he will vote on pair-wise comparisons, we can watch a group of perfectly rational individual actors come up with a collective set of preferences which is irrational. This is the problem of intransitivity, and it is only one of several

³⁴ i.e. provided the collective ranking is a strong ordering for at least the first two alternatives.

problems with voting schemes. As simple a situation as three actors ranking three alternatives can serve to illustrate the point.

Say we have three alternatives, ALT1, ALT2, and ALT3; and, three actors ACT1, ACT2, and ACT3, cast their ballots on all possible pairwise comparisons of the three alternatives to express their respective ordinal preferences. Say the outcomes are thus:

Ballot 1: ALT1 versus ALT2

ACT1: ALT1 > ALT2

ACT2: ALT2 > ALT1

ACT3: ALT1 > ALT2

i.e. actor ACT1 prefers ALT1 over ALT2;

actor ACT2 prefers ALT2 over ALT1;

and actor ACT3 prefers ALT1 over ALT2.

Ballot 2: ALT1 versus ALT3

ACT1: ALT1 > ALT3

ACT2: ALT3 > ALT1

ACT3: ALT3 > ALT1

Ballot 3: ALT2 versus ALT3

ACT1: ALT2 > ALT3

ACT2: ALT2 > ALT3

ACT3: ALT3 > ALT2

Analysis of the three ballots reveals that each of the three actors has a transitive - thus rational, though different - ordinal preference ordering:

ACT1: $ALT1 > ALT2 > ALT3$

ACT2: $ALT2 > ALT3 > ALT1$

ACT3: $ALT3 > ALT1 > ALT2$

The group of rational actors, however, fails to produce a rational preference ordering through the voting on the ordinal preference of pairwise comparisons.

From ballot 1 we have a 2:1 preference of $ALT1 > ALT2$.

From ballot 2 we have a 2:1 preference of $ALT3 > ALT1$.

After these first two ballots we would like to say that the group has preferences

$ALT1 > ALT2$ and $ALT3 > ALT1$.

We would also like to infer from these two preferences that the group prefers $ALT3$ over $ALT2$, i.e.

$ALT3 > ALT1 > ALT2$.

However, from ballot 3 we have a 2:1 preference of $ALT2 > ALT3$.

This phenomenon is commonly referred to as the majority paradox.³⁵

We are forced to accept the conclusion that a group of actors with perfectly rational preference orderings cannot be expected to resolve them into one single, rational collective preference ordering via majority rule.

³⁵The majority paradox' principle has been known for at least two centuries. Arrow traces it from a scholarly paper, "Memoires sur les elections au scrutin", (Memoires de l'Academie Royale des Sciences, 1791) by Jean-Charles de Borda, through a number of intermediaries to the present day.

Arrow, Kenneth, op. cit., pp. 92-96.

If we still intend to establish the group's collective preference ordering via the ballot, we will have to choose a voting scheme which is not subject to the majority paradox.

Choosing or designing a voting scheme, however, would have to be examined as carefully as selecting a social welfare function has to be. Our choice of the scheme would have to rest on doctrine, and in the United States the most acceptable doctrine is one which would support precisely that voting scheme which gets devastated by the majority paradox - namely one man, one vote. Any voting scheme, even the one-man one-vote scheme makes certain assumptions, and these have to be rooted in the society's cultural values. They cannot be derived in a completely "objective" manner because they embody some of our most basic values on fairness, justice and equity.³⁶

Besides the possibility of the majority paradox, we can see three other major difficulties with voting schemes.³⁷

Actors' preferences are not really ordinal; an actor has utilities

³⁶Wolfinger comes to this same conclusion when he argues that we cannot assess the relative power of actors without accepting unwarranted assumptions.

Wolfinger, Raymond E., "Reputation and Reality in the Study of Community Power", American Sociological Review, XXV (1960), 636-644.

³⁷Dahl gives a thorough analysis of various voting schemes and the philosophical assumptions that are implicit in them. He shows that a series of axioms carefully embodying the essence of various pure doctrines of democracy (Madisonian Democracy, Populistic Democracy and Polyarchal Democracy) fail to give us an acceptable rationale for the aggregation of actors' preferences.

Dahl, Robert A., A Preface to Democratic Theory, (Chicago: The University of Chicago Press, 1965...)

For a more general discussion, see also:

for the various alternatives which would have to be represented on an interval scale. It is not impossible to get a measure of these interval-scale utilities; what is impossible is to make a direct comparison of one actor's utilities with those of another actor, because each actor's utilities are unique only up to a linear transformation.³⁸ We thus are faced with the problem of having to assign a numerical weight distribution to the different kinds of impacts. Linear scoring functions are designed to do this, and weighting in a voting scheme is no more compatible with the decision-process criteria than weighting in scoring functions.³⁹

The second problem with voting schemes is the voting schemes' counterpart to the scoring functions' distribution of weights among actors, and it arises from Decision-process criteria #3:⁴⁰ Who should vote?

Baskin, Darryl, "American Pluralism - Theory, Practice and Ideology", Journal of Politics, (Feb., 1970).

³⁸For example, an actor's utilities (X_{ALT1} , X_{ALT2} , X_{ALT3}) for a set of three alternatives ALT1, ALT2, and ALT3, can be transformed into a set of utilities Y_{ALT1} , Y_{ALT2} , Y_{ALT3} where

$$Y_{ALT1} = nX_{ALT1} + C$$

$$Y_{ALT2} = nX_{ALT2} + C$$

etc.

where n and C are arbitrary constants of transformation. To make interpersonal comparisons of utilities we would have to establish some benchmarks for comparing two actors' utilities, and then solve for the constants of transformation. It is a philosophical, not a mathematical, question what basis we have for setting the necessary benchmarks.

For a discussion of measurability and transformations, see: Alchian, Armen, "The Meaning of Utility Measurement", American Econ-

In Chapter II we defined an actor to be the spokesman for an interest; in Chapter I we defined an interest to denote a person, a corporation, an institution, a group of persons, or any other phenomenon with a single, unified value or set of values. Mr. Jones, who lives on the corner, may be one interest; parents of school-aged children may be another interest; General Motors may be still another interest. Does each get one vote? Do they have votes that reflect their assets, or do they have votes to reflect the size of their respective memberships?⁴¹

Decision-process criterion #3,⁴² requiring the public agency to represent unrepresented interests, points up the fact that an unrepresented interest, by definition, tends to be excluded in a decision-making process which depends on a voting scheme. It would, of course, be extremely difficult if not impossible, to satisfy Assertion #7, because voting is such a direct expression of influence that the public agency probably could never do it.

All this suggests that if a voting scheme is to be used at all, it

omic Revue, Vol. 43, March 1953, pp. 26-50.

³⁹See Section A.2 of this chapter.

⁴⁰See Observation #9 in Section C.3, Chapter II.

⁴¹The reader need not rush to the conclusion that the size of the membership offers a panacea.

It is perfectly all right for a person to belong to many groups because he sustains many different activities, and he therefore is a constituent of many interests; it is quite another thing, however, to say that one should let that same person vote more than once.

⁴²See Assertion #7 in Section C.4, Chapter II.

would have to be a voting scheme which is tailor-made for a particular context.

One serious drawback of using a voting scheme specifically designed for our purpose, and therefore different from the voting scheme used for making the typical political decisions, is that it amounts to a one-shot vote; this destroys one of the best features of voting: log-rolling. When a political body votes on many issues it is understood that not necessarily each single decision is fair, but that there is compromise over several issues, that actor ACT1 will give in on one issue to actor ACT2 in order to secure ACT2's vote on a later issue. Obviously if the same set of actors only gets to vote on one issue, i.e. the choice of a course of action in solving the problem in question, and will not be convened again to vote on other issues, there can be no compromise over several issues.⁴³

One might think that a voting process by which the alternative which is the most preferred alternative by the smallest number of actors, or by none of them, is eliminated from the set of alternatives would begin to get us closer to a choice. This scheme does not work well either, because as we recognize in Decision-process criterion #4,⁴⁴ the decision-

⁴³There is a partial exception to this. Say we have a group of actors which is potentially impacted by a course of action, and a public agency tries to get a collective preference ordering for the group. Say some of the actors are on the scene only for the issue involved in the current decision, while others are, and will continue to be, involved in many other communal decisions - though in groups of a somewhat different make-up. Any two or more of these latter actors who know that they will meet again, to settle other issues in other times, at other places, can, of course, try to work out some compromises.

⁴⁴See Assertion #8, in Section D.2, Chapter II.

making process ought to have great flexibility in allowing old issues to be reopened and basic assumptions to be re-examined. Eliminating alternatives which are not highly preferred by any actors may result in eliminating alternatives which have the potential for serving as compromise alternatives.⁴⁵

III.B.2 Other Choice Processes

All of the aggregation and choice processes we have discussed thus far constitute procedures geared to producing a choice of a course of action with a distribution of impacts which is - in the group's and individual's own definition - fair, just, and equitable. The survey of aggregation and choice processes suggests that we have - for the problem as we have defined it - no operational procedures available which, if the proposed public agency follows them, will produce such a choice.

There is another kind of choice process which, in certain situations, finds good use. Instead of requiring the distribution of the impacts caused by the chosen course of action to be fair, just and equitable, a group may agree to follow a particular procedure, or ritual, where the procedure is inherently fair, just and equitable. This kind of an approach finds application in instances where all the actors involved recognize the fact that there is no course of action with an equitable distribution of impacts.

For example, say a particular society feels that there are certain

⁴⁵This is not to say that alternatives which are dominated should not be eliminated from further consideration.

services that it needs to have provided by its citizens, e.g. jury duty, military duty; but it also feels that the nature of the tasks that have to be carried out is such that the burden of carrying them out cannot be distributed evenly.⁴⁶ Since this situation is tantamount to the society making a collective decision to make unequal demands on some of its members - by assigning jury duty to some, and/or military duty to some, and no duties to others - the society would then have to find a process for selecting jurors and draftees which is fair and just, and which gives an equal chance of being selected. Though the incidence of hardship is not equitable, everyone is willing to accept it because the process is perceived to be inherently fair, just, and equitable so that the total outcome - i.e. the impacts and the process - are judged fair, just, and equitable.⁴⁷

Definition: inherently fair choice process

An inherently fair choice process is a choice process which makes the resulting choice fair, just, and equitable - although the distribution of impacts of the choice are not fair, just, and equitable.

The concept of an inherently fair choice process is obviously not an esoteric notion; it is widely applied in our day-to-day affairs. Consequently,

⁴⁶They would have to feel, for example, that paying for these services to the tune where it would not constitute an inequitable hardship on the individuals providing the services any longer, would be detrimental to the service itself.

⁴⁷When a very simple example is used to demonstrate the concept of a choice process which, by definition, makes the resulting choice a "fair" one, it tends to be received as an interesting but esoteric concept. The audience tends to feel that the validity of the concept could never be appreciated sufficiently by the man in the street to have him accept it. But, in fact, we work and live with the concept of inherently fair

the proposed public agency may be able to make use of this concept of an "inherently fair process" - as we shall call it - whenever the pre-conditions for its application are met.

The conditions are:

- 1) There are no alternatives with a fair, just, and equitable distribution of impacts available.
- 2) All actors agree on this.
- 3) All actors agree that the constraints which prevent the development of an alternative with a fair, just, and equitable distribution of impacts are appropriate.

Observation #12:

A choice can be fair, just, equitable and proper either because the nature of the impacts and the distribution of their incidence meets the group's standards or because the choice process is inherently fair.

III.C. Theory of Comprehensive Planning

As was pointed out elsewhere, theories of planning, with few exceptions,⁴⁸ fall into one of two classifications: descriptive planning theory⁴⁹ and normative planning theory.⁵⁰ Rather than survey the two kinds of planning studies, however, let us look at the major issues which

processes day-in, day-out, as is demonstrated by our approach to military duty, jury duty, or most other activities involving lotteries.

⁴⁸ Studies of studies are one such exception.

⁴⁹ Descriptive decision theories are reviewed by Bauer in "Descriptive Decision-Theory from the Administrative Viewpoint" in Raymond A. Bauer & Kenneth J. Gergen, ed., op.cit.

⁵⁰ Normative decision theories are reviewed in "Public Policy and Normative Economic Theory" by Zeckhauser and Schaefer in

are relevant to the problem at hand, and which are raised in either of the two kinds of theories. Six rather broad issues suggest themselves: 1) planning versus prediction, 2) the rationality of planning, 3) planners as leaders, 4) conflicts in planning, 5) the role of values, and 6) the concept and the distribution of power.

III.C.1 Planning Versus Prediction

An unflattering model of comprehensive planning in the U.S. holds that the activity called "planning" consists of predicting what is about to happen. The view grows primarily from 1) the frustration of the planners who have tried to influence the course of events rather than just adjust to it and 2) some close observations of public planning.⁵¹

A planning process which ends with the prediction of the course of events is, of course, incomplete. This is not to say, however, that predicting inevitable events is not an important function. Events which really are inevitable constitute constraints, and it is important that the community know what the constraints are, what it needs to adapt itself to.⁵²

The frustration of a planning agency is understandable, even justified, if the agency finds that it cannot design - and have its constitu-

Raymond A. Bauer & Kenneth J. Gergen, ed. *ibid.*

⁵¹ e.g. Edward Banfield, see Edward C. Banfield, Political Influence, (N.Y.: The Free Press of Glencoe, 1961), also

Nelson Polsby, Community Power Structure and Political Theory, *op.cit.*

Charles R. Adrian, "A Study of Three Communities", Public Administration Review, XVIII (1958), 208 - 213.

ency accept - any courses of action to meet the predicted, and assumedly undesirable, course of events.

Since prediction of the inevitable in no way pretends to be decision-making, the question of meeting the decision-process criteria posed in Chapter II does not really arise in this model of "planning".

III.C.2 The Rationality of Planning

The traditional planning models, evidenced by the planning literature from the first quarter of this century, focused on having lay (non-political) planning commissions - assisted by professional staffs - make the community's collective decisions.⁵³ "Rational" planning, from this point of view is the alternative way for making collective decisions to "dirty" politics. The rationality of the planning decisions were to be assured by; 1) appointment of individuals to the lay boards who had the community's interests at heart⁵⁴ and 2) the planning professionals' ability to be above the inherent selfishness of the various (special) interests that make up a community.

⁵²Britton Harris, "Plan or Projection: An Examination of the Use of Models in Planning", J.A.I.P., XXVI (Nov. 1960), 265-272.

⁵³John Hancock analyzes the changing role of city-planners in the period from 1900-1940.

John L. Hancock, "Planners in the Changing American City 1900-1940", J.A.I.P., September 1967.

John Dakin, "An Evaluation of the 'Choice' Theory of Planning", J.A.I.P., February 1963, 19-28.

⁵⁴Robert Walker shows, however, that Planning Commissions actually come from special interest groups rather than from circles concerned with the "public interest".

More and more planners have been questioning the validity of a non-political planning process model. At the same time, however, planners have acquired more and more tools for manipulating data, which tends to make many think in "rational", non-political terms. Some of these tools - population forecasting models, benefit-cost analysis, models for predicting land-use changes,⁵⁵ etc. - have the effect of allowing the planner to rely less and less on his intuition.

Most theorists agree that planning, when you can get at it well enough to watch it, turns out not to be entirely rational. There is, however, a real difference between the school of thought which holds that it ought to be all rational⁵⁶ and the school which argues that planning can never be, and should never be, all rational.

Today, it appears that most students of the planning process feel that one can never account for an entire planning process in only rational terms. One problem which cannot be overcome by the "rational school" is the problem of how to generate alternative solutions. No matter how long,

⁵⁵See: West C. Churchman, Prediction and Optimal Decisions, (Englewood Cliffs, N. J.: Prentice-Hall, 1961).

James Vedder, "Planning Problems with Multidimensional Consequences", Journal of the American Institute of Planners, XXXVI, (March 1970), pp. 112-119.

Morris Hill, "A Goals-Achievement Matrix for Evaluating Alternative Plans", op. cit.

Nathan Lichfield, "Cost-Benefit Analysis in Plan Evaluation", The Town-Planning Review, XXXV (July 1964), 159-169.

⁵⁶The optimists in this school take the view that the non-rational decisions, e.g. the links and nodes in the teleological goal fabric (see Sections A and C of Chapter IV) - are on the way to becoming rational.

and how thoroughly one analyzes a problem, to go from a statement of a problem to a suggested solution always requires a leap of the imagination.⁵⁷

Northrop defends the idea - which is familiar to every individual who has ever attended a jury where an architect has explained and defended a design of his - that a planner has to defend his concepts and decisions by a rational argument, even if he arrived at it through an intuitive or some other non-rational process.⁵⁸

There is another dichotomy besides the rational - non-rational dichotomy which suggests itself. Since most public plans affect people in a very direct way, one ought to make use of whatever tools one has to understand, as well as is humanly possible, precisely how the contemplated alternative courses of action touch people's lives. Where can we

⁵⁷See for example, John R. Seeley, "What is Planning? Definition and Strategy", J.A.I.P., XXVIII, (May 1962), 91-97.

Seeley defines planners as "artists of rationality", suggesting that the planner cannot fulfill his role by operating strictly within the rational sphere, that he cannot derive his solutions to a problem and the processes for dealing with them by steps of deductive logic. One important point he makes is that the non-rational process is not just a process which has not yet become rational and is on the way to become so. He calls it a "disorderly non-intellective, incalculable and unpredictable" process.

Dakin states: "(The Planning Theory) must account for non-rational elements, ... no theory (of planning) can be adequate which restricts planning to the narrowly defined rational (behaviour)".

John Dakin, "An Evaluation of the 'Choice' Theory of Planning", op. cit.

⁵⁸F. S. C. Northrop, The Logic of the Sciences and the Humanities, (N.Y.: MacMillan, 1947).

make use of our facilities for compassion, empathy, pity? Britton Harris⁵⁹ suggests a scientific-humanistic methodological dichotomy.

The concept of a rational planning process - in the sense of being aloof from the values of the individual interests who make up the group of impacted interests - is totally foreign to the decision-making environment we have been preparing in the first two chapters:

- As part of Process-criterion #2⁶⁰ we recognize that value-laden decisions are made throughout the decision-making process, and in Assertion #1⁶¹ we hold that the public agency is not to bring any values of its own to bear; this is diametrically opposed to the concept of the public as the "rational" entity making the value choices.⁶²

- Process-criterion #1⁶³ requires that we recognize the various actors' own perceptions as the reality on which they base their actions; we reject the notion that there exists a more rational reality, which has any real meaning in the group decision-making context, apart from the perceived reality. Observation #3 and Assertions #2 and #3⁶⁴ are particularly to the point.

⁵⁹Britton Harris, "The Limits of Science and Humanism in Planning", J.A.I.P., September 1967.

⁶⁰See Section B, Chapter II.

⁶¹See Section B.3, Chapter I.

⁶²Assertion #4, declaring the individual interests' sovereignty over their values, and Observation #6, rejecting the notion of a meaningful, valid system of values apart from the individual values - in Sections B.1 and B.2 of Chapter II, respectively - deal directly with this.

III.C.3 Planners as Leaders

Some people see public planning as a matter of leadership. According to this model a planner's job is not as vaguely described as: "helping a group of individual interests find and choose a course of action...";⁶⁵ a planner has a specific mission. And, he is to take the leadership in accomplishing this mission.

There are three kinds of rationale for justifying a mission-oriented planner. In one case a public agency is given specific responsibilities and authorities, through the duly elected and appointed government, to achieve a specific purpose. This can hardly be challenged. In another case, the planner is indeed hired "to help the group of actors... etc." and he projects his own values into the situation; he identifies what the problems are, and he moves all levers to solve the problem. He rationalizes the imposition of his values by saying that his professional skills cannot be separated from his value system; that when one hires him, one gets the entire package. If the group does not like him and/or his values they can replace him. The third case is one where a planner becomes a mission-oriented planner only after the group for which he works has identified a mission, i.e. an operationally defined goal, that they want him to help them achieve.

⁶³See Section A, Chapter II.

⁶⁴See Sections A.1, A.2, and A.3 of Chapter II, respectively.

⁶⁵This is the presumed mandate - and, therefore, motivation - of the particular public agency that we are looking at in this study. See Section A and B.3 of Chapter I.

It ought to be a simple matter to determine, in any one case, what the origin of a planner's mission is.⁶⁶ At a certain point in the process, a planner in any of these cases may need to become the moving force, the catalyst, i.e. a leader. Rossi suggests that, at that point, the personal histories of the individuals involved become very important.⁶⁷

Two kinds of criteria, both interrelated, increase in importance:

- 1) the inherent leadership qualities of the individual planner⁶⁸ and
- 2) the public's perception of the public agency's powers.⁶⁹

Lipsky sheds some light on the interrelationship of these two criteria by examining the mutual perceptions of public agencies and their constituent publics.⁷⁰

Johnson might come close to "putting it all together" in his descrip-

⁶⁶We are, in this study, of course, only looking at the case where the planner does not bring a mission with him to the job. (See Chapter I).

⁶⁷Peter H. Rossi, "Community Decision-Making", Administrative Science Quarterly, I (1957), 415-443, reprinted in Roland Young (ed.), Approaches to the Study of Politics, (Evanston: Northwestern Univ. Press, 1958), pp. 363-382.

⁶⁸Saul Alinsky argues that it is virtually impossible to create the kind of community organization, which is necessary to make effective collective decisions, from the outside. He therefore stresses the importance of working with the natural, "native" leadership in a community - rather than trying to create new leaders.

Saul Alinsky, "Native Leadership", in Hans Spiegel, ed., Citizen Participation in Urban Development: Vol. I, Concepts and Issues, (Washington D. C.: Center for Community Affairs, N.T.L. Institute for Applied Behavioral Science, 1968.)

⁶⁹Lipsky proposes that stereotyping by the public of the public agency, is directly proportional to the "extent of control and impact that these bureaucracies have on their lives".

Michael Lipsky, "Toward a Theory of Street-Level Bureaucracy", op. cit.

⁷⁰ibid.

tive model of community decision-making in metropolitan Chicago. The chief elements in his model are "proposers", "opposers", and "disposers".⁷¹

The public planner's role as a leader vis-a-vis the public has undergone - and is still undergoing - marked change. The enactment of the 1964 Economic Opportunity Bill with its proviso for "maximum feasibility participation of the poor", serves as an important milestone in the change of official thinking on the bureaucrat's leadership role. It appears that the thinking since then has followed a pendulum, overcompensating for shades of authoritarian behavior with a refusal to take the initiative, and then back in the other direction again.

Some of the more reasonable views that emerge are the following. Marshal Kaplan speaks of planners as potential "inside" advocates for relatively un-represented, or under-represented, interests.⁷² And Peattie finds that a planner's posture as an advocate does not relieve him of the more traditional agony of having to justify to himself the

⁷¹ Johnson, in his study of land-use planning in metropolitan Chicago, uses such a decision-making model with "proposers", "opposers", and "disposers". The "disposers" are actors who have been outside the immediate decision-making but who have both the ability and willingness to influence a decision one way or another and who can thus be appealed to; e.g. Saul Alinsky's "native leader", the Federal Government, etc.

⁷² He speaks of inside advocacy and outside advocacy as the two styles of advocacy practiced by planners who work for a given client inside and outside the public agency respectively.

Marshal Kaplan, "Advocacy and the Urban Poor", J.A.I.P., March 1969.

social responsibility of his posture.⁷³

When the process is completed, and an alternative has been chosen, the process by which the course of action was developed and was chosen will have left its own mark on the alternative, on how the various actors perceive it, on the way they perceive each other, each other's actions, and motives, etc.. One way of stating the principle behind this is that "the process becomes part of the product". Another important fact which a "process approach" recognizes is the reality that the final choice between alternatives is not the only important choice that gets made; crucial choices are made throughout the process.⁷⁴

The kind of process that most contemporary public planners appear to be able to live with - including the process as a product - might look thus:

- 1) It accomodates social theory and non-rational processes besides available prediction models and quantitative methods.⁷⁵
- 2) The process does not follow a rigid format or blueprint; it is able to adapt itself to the context of the problem at hand.⁷⁶

⁷³ Lisa Peattie, "Reflections on Advocacy Planning", J.A.I.P., March 1968, p. 81.

⁷⁴ See for example, the last chapter of Rascoe Martin; Frank Munger; Jesse Burkhead; Guthrie S. Birkhead; et al. Decisions in Syracuse, (Bloomington, Ind.; U. of Indiana Press, 1961).

Also Martin Meyersan and Edward C. Banfield, Politics, Planning and the Public Interest, (Glencoe, Ill.: The Free Press, 1955).

⁷⁵ Dakin suggests some ways for bringing social theory to bear on planning. John Dakin, "Thoughts on Theory Method", Plan, The Journal of the Town Planning Institute of Canada, I (Nov. 1960), 133-143.

⁷⁶ Lindblom explicitly rejects the idea of a formal, structured approach

3) It allows the various interests to play out their respective roles, as they see them, in their efforts to achieve their individual ends.⁷⁷

4) The public agency responds to the public's needs by generating alternative courses of action, providing insight and clarifying issues...⁷⁸

5) The various interests that constitute the community get the opportunity to participate in some more constructive fashion than just by opposing or vetoing a course of action; they have the opportunity to provide constructive input.⁷⁹

to planning.

Lindblom, C.E., "The Science of 'Muddling Through'", Public Administration Review, XIX (Spring, 1959) pp. 79-88.

See also, Marvin Manheim et al., Community Values in Highway Location and Design: a Procedural Guide, (Cambridge, Mass.: M.I.T. Urban Systems Laboratory Report No. 71-4, 1971), Chapters II and VIII.

⁷⁷ Norton Long's model of "The Local Community as an Ecology of Games" uses the concept of unconscious evolution through random mutations as an analogy and as a starting-point, for the description of the interaction of individual interests as a conscious ecology of interests and the games they play.

Norton Long, op. cit., 251-261.

⁷⁸ See Marvin Manheim, et al., Community Values in Highway Location and Design: a Procedural Guide, op. cit., Chapter IV.

Hans Blumenfeld sees design of the physical environment to play a key role in future planning.

Hans Blumenfeld, "The Role of Design", J.A.I.P., September 1967.

⁷⁹ Keyes and Teitcher point out that one of advocacy planning's most serious shortcomings - especially if carried out by planning school graduates with no experience of working on the inside of an "establishment" agency - lies therein that it tends to be very negative, that it tends only to criticize, to find fault, and to oppose, but that it tends not to add to the generation of solutions.

Langley C. Keyes, Jr., and Edward Teitcher, "Limitations of Advocacy Planning: A View from the Establishment", Journal of the American Institute of Planners, XXXVI, (July, 1970) pp. 225, 226.

Peattie, in her article "Drama in Advocacy Planning" pursues the

- 6) The public agency has adequate resources to devote itself to the task of solving the problem at hand rather than just warding off requests and demands for services.⁸⁰
- 7) Citizen participation plays an early role to make sure
- a) that the public agency is on the right track
 - b) that the public is well informed; but participation does not become the objective of the participants to the detriment of the solution of the problem at hand.⁸¹

definition of the concept of the "community" with a creative mind. She suggests that marshalling the loosely knit pluralistic group for a particular issue requires drama, in the sense of community theater, rather than recruiting group members for the support with a purely rational argument. The community organizer becomes the stage director in this theater.

Lisa R. Peattie, "Drama and Advocacy Planning", J.A.I.P., XXXVI, November 1970, pp. 405-410.

Johnson differentiates between the various interests' ability to participate and their actual participation. He suggests that, in our political system, it is important that they can become participants in a decision-making process whenever they choose - and that they know they can.

William C. Johnson, "The Power to Plan in American Metropolitan Areas", op. cit., pp. 236.

⁸⁰ Lipsky suggests that, giving the public agency responsibilities for which it has inadequate community-interaction resources, necessarily leads to bureaucratic behavior on the agency's part which, "however understandable and well-intended, may have invidious effects on citizen impressions of governmental responsiveness and equity of performance."

Michael Lipsky, "Toward a Theory of Street-Level Bureaucracy", op. cit.

⁸¹ What Seaver calls the "Dilemma of Citizen Participation" is the phenomenon that, on the one hand, non-participation in a decision tends to create opposition but that, on the other hand, early participation tends to arm an opposition much more than it tends to create or bring out support.

Robert C. Seaver, "The Dilemma of Citizen Participation", in Hans Spiegel, ed., Citizen Participation in Urban Development: Vol. I, Concepts and Issues, op. cit.

Citizen Participation did not have all the connotations one decade ago that it has today. Levine argued in 1960 that the planning process in the city of Philadelphia had a "real" decision-making role for the

- 8) The public is well informed.⁸²
- 9) The various interests affected negotiate - via the process - the issues affecting them.⁸³
- 10) The public agency's responsibility to contribute to the solution of a particular community problem is not vacated by the need and the desirability of citizen participation.⁸⁴

citizens; one might hypothesize that this is one of the reasons that planning in that city has, by planners' own criteria, been relatively successful.

Aaron Levine, "Citizen Participation", J.A.I.P., XXVI, August 1960, pp. 195-200.

Albert Wight makes a very perceptive analysis of what participation means in education. Some of the characteristics which he ascribes to participative education have also meaning for participatory decision-making.

Albert R. Wight, "Participatory Education and the Inevitable Revolution", Journal of Creative Behavior, Vol. 4, Nov. 4, fall '70, pp. 234-282.

⁸² One of Stuart Chapin's recommended techniques is to rely on - or at least to make the most of - "an informed metropolitan community".

Some of the ways he recommends to achieve this:

- 1) continuing program of public information, using all mass media,
- 2) direct participation by individuals and groups to develop a sense of responsibility,
- 3) demonstration projects of self-help and mutual co-operation,
- 4) field studies and instruction of school children.

F. Stuart Chapin, Jr. "Taking Stock of Techniques for Shaping Urban Growth", J.A.I.P., (May 1963), pp. 76-87.

⁸³ Johnson sees the planning process as, essentially, a process of political negotiation between political jurisdictional actors; he does not, however, specify what role the professional planner or public agency should play to bring this about.

William C. Johnson, op. cit.

Rossi perceives community decision-making via the "process approach" as a "complete web of social relations" - not explainable in terms of something as simple as a power structure. He sees the public agency to be part of this web...

Peter H. Rossi, "Community Decision-Making", op. cit.

⁸⁴ Cohen suggests that the authority of a central urban planning agency cannot be abandoned for the sake of a form of participation which gives

The concept of "planners as leaders" has only limited application in our situation. As we have defined the problem in Chapter I⁸⁵ and with the decision-process criteria that we developed in Chapter II, particularly criteria #1 and #3, the planner's leadership has to be restricted to the approach where he pursues the purpose as it is defined by the group's members. This means he can serve as a go-between for conflicting interests in the group, as a catalyst for and generator of constructive ideas that are held by members of the group, as arbitrator or peace-maker in a group crisis.

III.C.4 Conflicts in Planning

No student of planning theory can ignore the various forms of conflict that appear to be inherent in bringing about change - and planning deals with bringing about change. Some, in fact, have focused on the conflict features and have built models of the community planning context - or strategies for planning in that context - around the conflict features.⁸⁶

Depending on the point of view, actors perceive different prob-

the public's constituent interests a veto, but he does favor involving planners in more of the decision-making.

Henry Cohen, "Planning Rationally", Academy of Political Science Proceedings, August 1969, 29:179-29.

See also, Marvin Manheim et al., Community Values in Highway Location and Design: A Procedural Guide, op. cit.

⁸⁵See Sections A and B.3.

⁸⁶Norton Long, "The Local Community as an Ecology of Games", American Journal of Sociology, LXIV (1958), 251-261.

David Braybrook and Charles Lindblom, A Strategy of Decision, (N.Y.: The Free Press, 1963).

lems⁸⁷; even when they perceive the same problem, they don't see the causes and the possible solutions to be the same. Identifying causes can, of course, involve pointing an accusatory finger at some actors. In that case we must expect those actors to react to the accusation and to try to demonstrate that they are not the cause of the problem. As the controversy picks up momentum, it soon is able to feed itself; the original problem may get lost in the resultant struggle of actors trying to protect their own image and unload the burden of guilt on others.

Public agency behaviour is not unlike the behaviour of other bureaucracies and other actors.⁸⁸ Public agencies find it very difficult to find fault with their own behaviour, and by controlling the flow of information they usually happen to be in a very good position to control what is known about them. They also show no more eagerness to share the

⁸⁷ Eaton and Gilbert give a good discussion of the difference between the perception of the "activists" in a community and the perception of the broader community membership.

Neil Gilbert and Joseph W. Eaton, "Who Speaks for the Poor", J.A.I.P., XXXVI, November 1970, pp. 411-416.

⁸⁸ A minority with particular problems, e.g. the poor - find themselves, what Frieden and Morris call, "the scapegoats for their own condition;" the majority may blame the inadequacy of the minority for hardships they may be suffering rather than being willing to recognize the shortcomings of their collective decision-making system.

Bernard J. Frieden and Robert Morris, ed., Urban Planning and Social Policy, (New York: Basic Books, 1968), p. 181.

Peattie and others propose that the injection of advocacy planners (a la Urban Planning Aid, Inc., of Cambridge, Mass.) is one way of humanizing the institutionalized planning process, by preventing "the exercise of bureaucratic power from leading to a new, diffuse despotism, in which power appears in the image of technical necessity".

Lisa R. Peattie, "Reflections on Advocacy Planning", op. cit.

powers they have, because of their position as a bureaucracy, than do any other actors.⁸⁹ One school of thought believes that confrontation of one interest by another - as opposed to negotiation, co-operation, and compromise - is the only strategy which gives an interest a reasonable chance of having the collective choice reflect that interest's values. It actually can be seen as a struggle to make the public agency accountable to the public. If the public cannot get the public agency to respond, the public needs some other technical expertise that it does have the power to hire and fire, i.e. an advocate⁹⁰. Using confrontation as a tactic means, of course, opposing many contemplated choices. And, if a number of actors oppose contemplated choices more and more frequently - chances are - the whole collective decision-making process bogs down, and no course of action can win the necessary support to be implemented. The null-alternative, i.e. the alternative of doing nothing to intervene in the course of events, is thus chosen - by default - more and

⁸⁹ Arnstein points out that "in most cases where power has come to be shared with the citizens, it was taken by the citizens, not given by the public agency."

Sherry R. Arnstein, "A Ladder of Citizen Participation", J.A.I.P., July 1969; p. 216-224.

Mogulof sees an evolution in the format of citizen participation. The federal programs he analyzed started with a public agency-citizen coalition, bent on solving a given problem, but developed into adversary relationships between agency and the citizens, each sub-group having its own technical competence and the power to veto the choice of an alternative.

Melvin Mogulof, "Coalition to Adversary: Citizen Participation in Three Federal Programs", J.A.I.P., July 1969.

⁹⁰ Sherry R. Arnstein, "A Ladder of Citizen Participation", op. cit.

more frequently.⁹¹

There is nothing inherently wrong with choosing the null-alternative; it may, in fact, be a very good choice in many cases. What is wrong, however, is to choose it by default rather than choosing it consciously and explicitly because it is the best "course of action" (actually, "course of inaction").⁹²

The extreme wing of the "conflict school of thought" - argues that those actors who have some problems that need solving, and who have not had satisfaction from the public agency, should never cooperate with

⁹¹ Davies points out that it is far easier for the public to prevent the choice of an alternative than to cause some alternative to be chosen.

J. Clarence Davies, Neighbourhoods and Urban Renewal, (N.Y.: Columbia University Press, 1966).

Peattie realizes that the kind of advocacy which implies confrontation between interests as the vehicle for addressing issues may, in the end, mean that "no project for a common good can ever be carried out".

Lisa R. Peattie, "Reflections on Advocacy Planning", op. cit.

Anton sees a more constructive potential in an alternative having to be "passed" by several veto-holding actors. He hypothesizes that alternatives which get developed, and particularly the alternative which gets chosen, can be insured to have no major technical defects - which is not to say that it will be an excellent solution - if it has to get across many hurdles of technical and political review.

Thomas J. Anton, "Politics and Planning in a Swedish Suburb", J.A.I.P., July 1969.

Johnson suggests that planners can develop alternatives which minimize the possibility that "Proposers" and the "Opposers" see the choice to be made as one of clear opposites.

William C. Johnson, "The Power to Plan in American Metropolitan Areas", op. cit., pp. 253, 254.

⁹² One application of Johnson's "disposer" concept is aimed at getting the group out of the null-alternative dilemma. It suggests that an (hitherto) outside actor who has the power and the willingness to make a decision, if the actors directly involved fail to reach agreement, get involved. For example, the next-larger governmental jurisdiction lends itself to playing this role.

William C. Johnson, *Ibid.*

the agency, that cooperation really means co-option, because it takes a whole range of direct-action options away from those actors.⁹³

Perception appears to be the crucial element in the role of conflict in planning. And it is well possible that if we understood the role of perception in the cybernetic relationships between actors and their behavior as they perceive, take on, and act out, their various roles in the collective decision-making process; - that we would then less frequently find it attractive to use a tactic of confrontation and conflict.⁹⁴

If we review the main issues of the concept of "conflict in planning" in the light of Decision-process criteria #1 and #2, it appears that whatever role conflict may play, there is no legitimate basis for conflict between the public agency and the public.

⁹³ Piven suggests that even advocacy does not really help the advocate's client, that, in fact, it prevents him from taking direct action by getting him involved in the establishment's bureaucratic ways of dealing with problems.

Francis Fox Piven, "Whom Does the Advocate Planner Serve?", Social Policy, May/June, 1970.

We would have to count Aronowitz among these.

Stanley Aronowitz, "The Dialectics of Community Control", Social Policy, May/June, 1970.

Marshal Kaplan, on the other hand, distinguishes between advocacy as the rendering of professional expertise, i.e. technical assistance, and the posture of the advocate (and his client) vis-a-vis the public agency. Confrontation or coalition is a matter of tactics; advocacy does not of itself suggest one or the other.

Marshal Kaplan, "Advocacy and the Urban Poor", op. cit.

⁹⁴ Lipsky, for example, offers the opinion that the threat (physical and psychological) which the public agency perceives, is in inverse proportion to the amount of autocratic control it has over the public.

Michael Lipsky, "Toward a Theory of Street-Level Bureaucracy", op. cit.

III.C.5. The role of values

The once widely-held belief that the professional planner can, somehow, perform his job in a strictly objective manner - without making use of some value system - has little currency today. The making of choices involves the application of values, and choice is ubiquitous throughout the entire decision-making process.⁹⁵ The important thing, therefore, is to talk about what values the professional should be applying in the many small choices that are made in the progress of the development of alternative courses of action.⁹⁶

There also appears to be increasing agreement in the planning profession that the planner has no business applying his own personal values because this becomes a matter of imposing - rather than just applying - values on the public.⁹⁷ Planners who suggest that they know

⁹⁵ We recognized this by adopting Decision-process criterion #2 (see Section B, Chapter II).

⁹⁶ Davidoff and Reiner, in their reply to a critique of their "Choice Process", argue that choice is ubiquitous and that their proposed approach is designed to deal with this.

Paul Davidoff and Thomas A. Reiner, "A Choice Theory of Planning", *J.A.I.P.*, XXVIII (May, 1962), 102-115.

Gunnar Myrdal's lucid discussion of the circumstances under which value and choice continuously enter research is relevant here.

Gunnar Myrdal, Value in Social Theory, op. cit.

See also, West C. Churchman, Prediction and Optimal Decisions, op. cit. & Ernst Nagel, The Structure of Science, (New York: Harcourt, Brace and World, 1961).

⁹⁷ Davidoff and Reiner are among those who propose that the planner not impose his values on his client in any way. They say that a public agency planner, to whom planning functions have been delegated, has a "client" with a value system of his own. Though the client's values are of an elusive nature, they imply that the client has - somewhere deep within him - needs and wants which constitute an internally consistent set of values.

Paul Davidoff and Thomas A. Reiner, "A Choice Theory of Planning",

what is good for the public, i.e. that their own personal value system would serve the whole of society as well, run the risk of being labelled "elitists". To presume that a person or an agency embodies a value system which is the "correct" or best value system for a community of diverse interests is not only difficult to defend in terms of logic, it is also a very arrogant position to take.

Most writers on the subject deal with this issue of the planner's values versus the plannee's values by suggesting that the public agency should plan with, rather than plan for, the public.⁹⁸ This does not really tell the planner what he should do, but it does make it clear that he cannot tell the public, in an authoritarian way, what is good for it. Even the planner who embraces this idea, however, is pretty much at a loss as to how he can get the public's values into the development of alternatives.

What is really desired is to get the public's values directly into the development of alternatives, without translation by the public agency.

The concept of citizen participation is obviously central. But, when all is said and done, it turns out that participation cannot do everything. For one thing, it is costly and demanding on the citizens - and sometimes completely impossible - for the citizen actors to participate in the very early planning stages. The concept of advocacy, i.e. giving the citizen the resources and technical competence to participate,

op. cit.

⁹⁸ Marshall Kaplan, "Advocacy and the Urban Poor", op. cit.

does not completely solve the problem either.⁹⁹

There are those of us who feel that the planner can be more sensitive to the public's values by consciously keeping an open mind, by trying to perceive problems and solutions through the citizen's eyes, by trying to experience empathy in understanding how the issues at hand touch the people's lives.¹⁰⁰ Dakin expresses some of this same belief when he suggests that the planner and his plan can absorb the community's values by a process akin to osmosis.¹⁰¹

Speaking of the "community's values" versus the "planner's values" is somewhat misleading because that makes it sound as if there were one single, consistent set of community values. The public consists of different - even conflicting - interests, each with its own set of values.¹⁰² "Working with" the community, therefore, can never be seen as the rather simple task of identifying the relevant value of "the community" and then designing a solution on its behalf; rather, it is a task of getting the community to come to terms with the relevant values

⁹⁹ Davidoff argued in 1965 that a pluralistic community needed a pluralistic decision-making process, and an important segment of the planning profession has since become committed to achieve some of the pluralism via advocating for interests which have traditionally been unrepresented. But what about the interest who cannot find a professional to advocate his position?

Paul Davidoff, "Advocacy and Pluralism in Planning", op. cit.

¹⁰⁰ Marvin Manheim, et al., Community Values in Highway Location and Design: A Procedural Guide, op. cit., Chapters I, II.

¹⁰¹ John Dakin, "The Background Ideas of Planning", Plan, the Journal of the Town Planning Institute of Canada, II, Nov. 3, 1961, pp. 96-107.

¹⁰² See Observations #1 and #2, in Section B, Chapter I, and Section B.2, Chapter II, respectively.

which conflict so that a course of action warrants their collective support.¹⁰³

The concepts which are currently emerging from the evolving theory of comprehensive planning, about the role of values in planning, thus tend to support Decision-process criterion #2, "identification of applied values",¹⁰⁴ but they do not provide us a clear picture of how the public agency ought to proceed. In developing an approach or strategy for the public agency to follow we must, in fact, address ourselves to operationalizing the concept of "planning with" the public - as opposed to "planning for" the public.

III.C.6. The concept and the distribution of power

Definition: Power

Power is a measure of the amount of influence an actor has in effecting a particular choice.

Hunter's model of community decision-making by the hierarchically

¹⁰³ Much work has been done on the decision-making involving multi-dimensional goals. Most of this work deals with the making of choices among alternatives each of which has impacts which cannot be measured in the same value units; these values, though not readily comparable to each other, are held by one interest - though not necessarily one individual. The notable difference in the problem formation developed in these chapters is that we have defined the community to consist of different interests, each of which has, within cultural limits, a sovereign value system. (See Assertion #4, Section B.1, Chapter II).

James Vedder, "Planning Problems with Multidimensional Consequences", op. cit.

Nathan Lichfield, "Cost-Benefit Analysis in Plan Evaluation", op. cit.

Morris Hill, "A Goals-Achievement Matrix for Evaluating Alternative Plans", op. cit.

¹⁰⁴ Section B, Chapter II.

structured elite of a community, i.e. by the "power structure", has provided a compelling conceptual framework for a generation of planning students.¹⁰⁵ From the 1950's up until at least the mid-1960's, research on community decision-making more often than not meant identifying the power structure, the handful of behind-the-scenes decision-makers who were seen to exercise unofficial but de-facto control over the collective decisions which get made.¹⁰⁶

¹⁰⁵ See Floyd Hunter, Community Power Structure, (Garden City, N.Y.: Doubleday Anchor, 1963) a paperback. (Chapel Hill: University of North Carolina, 1953).

While his original study of Regional City came out in 1953, its re-printing in paperback form in the early 1960's appears to have heralded the period of its greatest popularity among students of community decision-making.

Scores of graduate students wrote theses applying the power-structure concept to one context or another; such as:

Delbert C. Miller, "Industry and Community Power Structure: A Comparative Study of an American and an English City", American Sociological Review, XXIII, 1959, pp. 9-15.

Others made improvements in the method of identifying the decision-making elite.

Polsby, for example, developed a technique for identifying the community leaders by creating "leadership-pools" which he then refined - instead of using the "panel technique".

Nelson W. Polsby, "Three Problems in the Analysis of Community Power", American Sociological Review, XXIV, 1959), 796-803.

¹⁰⁶ Another classic set of power structure studies, actually carried out much earlier than Hunter's, which contributed to this theory was the work of the Lynds. Since they studied a city with a rather atypical history, its lessons were much harder to translate to other settings.

Robert S. Lynd and Helen Lynd, Middletown, (N.Y.: Harcourt and World, 1929).

Robert S. Lynd and Helen Lynd, Middletown in Transition, (N.Y.: Harcourt, Brace and Co., 1937).

For a good example of how an in-depth discussion of social stratification implicitly becomes the community decision-making power-structure, see:

W. Lloyd Warner and Paul S. Lunt, The Social Life of a Modern Community, (New Haven; Yale University Press, 1941).

See also:

Later studies¹⁰⁷ of the nature of political power and influence in community decision-making, which did not start with the assumption that a powerful elite is running things, suggest that a hierarchical structure of community power is wholly inadequate to describe political influence. While the power structure theorists relied mostly on individuals' reputation for having power in determining their places in the power structure, the more recent researchers have examined individuals' actual exercise of power.¹⁰⁸

The conclusions of this kind of research do not fit one single model;

Roland J. Pelligrin and Charles H. Goages, "Absentee Owned Corporations and Community Power Structure", American Journal of Sociology, LXI (1956), 413-419.

Robert O. Schultze, "Economic Dominants in Community Power Structure", American Sociological Review, XXIII (1958), 3-9.

Wallace S. Sayre and Herbert Kaufman, Governing New York City, (N.Y.: Russel Sage Foundation, 1960).

For a good bibliography of stratification theory - or power structure theory - see Nelson W. Polsby, Community Power Structure and Political Theory, op. cit.

¹⁰⁷This later research usually used a political-science approach while the structured power models are ascribed to sociologists' (mistaken) perceptions.

Nelson W. Polsby, Community Power Structure and Political Theory, op. cit.

Edward C. Banfield, Political Influence, op. cit.

¹⁰⁸Rossi describes one of three ways of studying community decision-making as being the "partisan-approach".

Peter H. Rossi, "Community Decision-Making", op. cit.

See also: Robert Dahl, "The Concept of Power", Behavioral Science, II, (1957), 201-215.

Herbert A. Simon, "Notes and Observations on the Measurement of Political Power", Journal of Politics, XV, (1953), 500-516.

Herbert Kaufman and Victor Jones, "The Mystery of Power", Public Administration Review, XIV (1954), 205-212.

Nelson W. Polsby, "The Sociology of Community Power: A Reassessment", Social Forces, XXXVII (1957), 232-236.

rather, the various models that have been proposed as a result appear to form more or less a continuum from a model of the exercise of centralized power - through models of networks of influence and polycentric concentrations of power - to models of completely dispersed power.¹⁰⁹

In recent years citizen participation - in the form of governmental bodies as in Model Cities programs, in the form of "class-action groups"¹¹⁰ in other public contexts, and in the form of direct involvement by local - often well organized - interests in highway planning, airport planning, power-plant planning, and other large project planning - has eclipsed citizen participation via the established lay boards and authorities discussed earlier in this Chapter under "the rationality of planning".¹¹¹ In fact, these usually unpaid lay boards and authorities, designed to

Nelson W. Polsby, "Three Problems in the Analysis of Community Power", op. cit.

Raymond E. Wolfinger, "Reputation and Reality in the Study of 'Community Power'", op. cit.

¹⁰⁹From a study of New York City, Sayre and Kaufman suggest a number of small pyramids rather than a single pyramid of power.

Wallace S. Sayre and Herbert Kaufman, Governing New York City, op. cit.

Wheaton argues that the diffused model is the only realistic model for the U.S. today.

William L. C. Wheaton, "Public and Private Agents of Change in Urban Development", in "Urban Expansion: Problems and Needs", HHFA, Papers presented at Administrator's Spring Conference, 1963.

¹¹⁰Class-action groups are literal examples of "individual interests" as defined in Section B.1 of Chapter I. In fact, the technical representative of such a group - usually an attorney, depending on the class-action - is the counterpart of the "actor" defined at the beginning of Chapter II.

¹¹¹Roland Warren, "Model Cities First Round: Politics, Planning and Participation", J.A.I.P., July 1969.

interject the citizens' values, have become "the establishment" which, by definition, can't be trusted. The citizen's current distrust toward established bodies is so pervasive that even anti-establishment groups¹¹² are soon viewed as part of the establishment by individuals that are outside both belligerent parties (establishment and anti-establishment) for the mere reason that these groups have been in existence for some time and therefore must share some part of the responsibility for the status quo of any of a number of problems. The Cahns propose that the citizen should really concern himself with how and where non-reversible decisions are made; these are the points in the decision-making process that demand citizen participation. Participation in these decisions should be of a level so that the public is later willing to live with the outcome and does not feel that its prerogative was pre-empted by the public agency.¹¹³

The phenomenon of citizen participation is part of a very broad, and at this point in time relatively ill-understood, movement which has the

¹¹²The author has a particular Model Neighbourhood Citizens' Council in mind, which spent most of its time battling City Hall and the Federal Department of Housing and Urban Development.

¹¹³What the Cahns call "the genetic fallacy" is the infinite regression argument on participation (which points out that the public was not involved in the decision on how it should be involved; and, if it was involved in that, it was not involved in the decision that it should be involved in deciding how it should be involved...etc.). They also refer to this as the "Original Sin of Participation". They suggest that the pertinent question to be asked is: Were any decisions, and the basis for making them, irrevocably removed from public scrutiny?

Edgar S. and Jean Camber Cahn, "Citizen Participation", in Hans Spiegel, ed., "Citizen Participation in Urban Development: Vol. I, Concepts and Issues", op. cit.

potential of effecting a complete redistribution of power.¹¹⁴ Though most planners and other professionals working in projects that require group decision-making are wrapped up in this movement in one way or another, the movement is still very much in flux and we can only speculate on its aggregate effect on the distribution of power, once some sort of an equilibrium is reached.¹¹⁵

¹¹⁴It is for this reason that participation, like Decision-Theory, is talked and written about in two different ways: there are normative models of participation, and there are descriptive models.

¹¹⁵Mogulof, in his analysis of citizen participation in the Federal Juvenile Delinquency Demonstration Program, O.E.O.'s Community Action Program, and in H.U.D.'s Model Cities Program, finds racial separatism, communal conflict, availability of technical assistance, and character of leadership to be the key variables determining the effectiveness of citizen participation.

He also lists some other influential variables:

- regional location
- minority residential concentration
- community experience with participatory programs
- the minority percentage of the total community population
- community riot history
- style of political life
- economic base of the community

Melvin Mogulof, "Coalition to Adversary: Citizen Participation in Three Federal Programs", op. cit.

Arnstein analyzed citizen participation in urban renewal, anti-poverty programs, and in Model Cities programs, and he developed a "typology of participation" which is intended to provoke soul-searching on the part of public agencies. The typology ranks different forms of participation by the degree of power the citizen has.

8 citizen control)	degrees of citizen power
7 delegated power)	
6 partnership)	
5 placation)	degrees of tokenism
4 consultation)	
3 informing)	
2 therapy)	non-participation
1 manipulation)	

Sherry R. Arnstein, "A Ladder of Citizen Participation", op. cit. (cont.)

Most students of group decision-making agree that power is the central concept. In planning, the decision-making models have gone from one which left the power in the (disinterested) professional's hands, to one which saw the power being held by a small elite in the community, to a number of models which saw the power distributed in the community, and are arriving at a model of participatory decision-making which leaves the power completely disaggregated. For a decision-making process to be judged "good", it will have to meet the test of whether it permits any actor to exercise undue influence, i.e. more than his "just" share of power. While we cannot ever establish a distribution of power which is universally acceptable, any given group can establish norms that fit its cultural values.¹¹⁶

Simon and Dahl have been more rigorous in their studies of the concept of power than most other students of decision-making. Simon sees power to be a dynamic - rather than a static - phenomenon; he sees the concept to take on meaning at the time, or in anticipation of the time, when the system undergoes some change.¹¹⁷ Mann, in defense of the power structure theorists, argues that the influence relationships between actors are always

Crain and Rosenthal's study of citizen participation leads them to conclude: "If public officials are going to do the right thing, the people should leave them alone while they are doing it."

Robert Crain and Donald B. Rosenthal, "Community Status as a Dimension of Local Decision-Making", in Hans Spiegel, ed., Citizen Participation in Urban Development: Vol. I, Concepts and Issues, op. cit.

An excellent bibliography on Citizen Participation can be found in Hans Spiegel, ed., *ibid.* Spiegel and Mittenenthal give an overview of the literature in one of that book's papers: "The Many Faces of Citizen Participation: A Bibliographic Overview".

¹¹⁶See Observation #8, Section C, Chapter II.

¹¹⁷Herbert A. Simon, "Notes and Observations on the Measurement of Political:

in flux and suggests that the processes by which these power relationships change ought to be of great interest to the planner.¹¹⁸ Dahl's analysis of the bases of actors' influence could be used for studying the dynamics of influence, suggested by Mann and Simon.

He summarizes the bases for influence thus:

- 1) money and credit
- 2) control over jobs
- 3) control over the information of others
- 4) social standing
- 5) knowledge and expertness
- 6) popularity, esteem, charisma
- 7) legality, constitutionality, officiality
- 8) ethnic solidarity
- 9) right to vote.¹¹⁹

This review of the current concepts of power in planning thought fails to provide us with an operational model for the public agency to follow.

Power", op. cit.

¹¹⁸Lawrence D. Mann, "Studies in Community Decision-Making", J.A.I.P., XXX (February 1964), 58-73.

¹¹⁹Robert A. Dahl, "The Analysis of Influence in Local Communities", in Bernard J. Frieden & Robert Morris, ed., Urban Planning and Social Policy, op. cit.

The degree to which each actor realizes his potential influence depends on

- 1) access to the bases,
- 2) the rate of exploitation of the bases,
- and 3) the efficiency with which he exploits them.

In analyzing the bases, Dahl identifies the key phenomena thus:

- 1) the number (of bases),

The main ideas have been incorporated in Decision-process criterion #3.¹²⁰
 The agency has to recognize the fact that actors have unequal power, but the agency cannot really decide on its own what distribution of power is fair and just; it has to defer to the group's cultural values for a determination of what the appropriate norms and standards are.

III.D. Summary

While we recognize¹²¹ the existence of a set of cultural values for the group, we find that we cannot presume that anyone can define the group's welfare function. This is so largely because we have defined the problem¹²² to be one of helping a group of different interests, with different values, to find and choose a course of action which they can support collectively. We thus have, in effect, ruled those cases where a number of actors can readily define their social welfare function to be outside the context we are addressing in this study. Where all group members do agree on values, it is at the level of cultural values - which is not a sufficiently operational level to yield a choice.

"Solving" the set of different preference orderings for a social

-
- 2) distribution (of bases among actors)
 - 3) patterns of allocation (of bases among actors)
 - 4) dominance (of one base over another)
 - 5) complementarity
- and 6) generality (or specificity of bases).

¹²⁰See Section C of Chapter II: Role of the group's cultural values.

¹²¹Observation #8, Section C, Chapter II.

¹²²See all of Chapter I.

welfare function would require that we recognize either the possibility of the existence of an ultimate evaluator or the feasibility of aggregating disparate preference orderings via a completely objective algorithm. As we have seen, both of these requisites are in contravention of the Decision-process criteria developed in Chapter II. Similarly, the existence of a shared, and sufficiently compelling view of the universe can, at least in the context of contemporary North-American society, be ruled out because many of the actors' perceived means-ends relations are not entirely independent of their value systems.

Consequently, we can conclude that the public agency should not perceive its job to consist of unearthing a social welfare function for the group which may be difficult to find, but which nevertheless exists.

The development and use by the public agency of scoring functions - which are nothing more than particularly quantitative algorithms for defining a group's social welfare function - also has to be ruled out unless we are willing to violate the decision-process criteria.

While voting schemes would appear to be more in conformity with the spirit of decision-making by a public agency in the context of a pluralistic group, it turns out that the public agency cannot really look to them for providing the group with a process which meets the decision-process criteria. Adoption of a voting scheme other than one-man one-vote requires that someone make an assignment of relative importance of different interests which, in turn, requires value judgements that no one really can make, certainly not the public agency. A one-man one-vote scheme, in the context of inter-

ests consisting of individuals, groups, corporations and institutions¹²³ has little meaning and is, besides, dogged by the possibility of the majority paradox.

A potentially very useful concept which does not violate any Decision-process criteria is the notion of an inherently fair choice process; it allows the group to accept a choice, which may of necessity have an unfair distribution of impacts, on the basis of the fairness of the way the choice is made. The broad planning theory issues that were discussed - i.e. planning versus prediction, the rationality of planning, planners as leaders, conflicts in planning, the role of values, and the concept and the distribution of power - provide a number of concepts which can be used to help define an appropriate role for a public agency in helping a group to develop and choose a course of action. They do not, however, provide a process that the public agency can rely on to produce a collective choice for us.

Our review of how planning theory deals with a number of the most relevant issues indicates that: 1) not all planning theorists are ready to accept the observations, and assertions developed as part of the definition of the problem and as specific elements of the four Decision-process criteria¹²⁴ and 2) while there are many planning theories, there is no

¹²³See the definitions of "individual interest" and "group" in Section B.1 of Chapter I, and Section B.2 of Chapter I, respectively - as well as Observation #2 in Section B.2 of Chapter I.

¹²⁴on 1) understandability and believability, 2) identification of applied values, 3) role of the group's cultural values, and 4) adaptability (see Chapter II, Sections A, B, C and D, respectively, for the full criteria).

general planning theory which is operational enough to prescribe how a public agency, as defined and constrained in Chapters I-II should proceed.¹²⁵

Not only our study, but planning in general, will benefit from a general theory when one is developed. Dakin argues that planners compare poorly with other scientific disciplines in the amount of effort they put into the development of a general theory of their subject. His conception of the planning process sees Planning Theory, as well as other theories, play a more substantive role in the decision-making process.¹²⁶ He suggests that any general theory of planning must meet the following criteria:¹²⁷

- 1) The theory must include the total planning process.
- 2) It must not depend on a particular political ideology or system.

¹²⁵See, for example:

Gordon E. Cherry, "The Town Planner and His Profession", Journal of the Town Planning Institute, XLVIII, (May 1962, pp. 128-131.)
 Paul Kriesis, "The Planner in the Toga", Journal of the Town Planning Institute, XLVIII (April 1962), pp. 90-94 and (May 1962) pp. 131-134.

¹²⁶See figure 4, p. 143, in John Dakin, "Thoughts on Theory-Method", op.cit.

¹²⁷However, Mann, addressing the same issue, warns that there is enough diversity among communities and contexts that no single decision-making model could fit them all, and that if it did, it would have to be so general to lose its usefulness.

Lawrence D. Mann, "Studies in Community Decision-Making", op. cit.

And, Britton Harris argues that there cannot be a general theory of city planning - apart from a theory of cities - since we cannot handle the various values held by (members of) the community.

Britton Harris, "Plan or Projection: An Examination of the Use of Models in Planning", op. cit.

- 3) It must be related to physical and social theory.
- 4) It must be able to accommodate non-rational behavior.¹²⁸

We conclude that the public agency which is motivated by the desire to help a group of diverse interests with a common purpose find and choose a course of action which is fair, just and equitable - from their own points of view - and which has no other, hidden agenda of its own, cannot use the existing methods or theories for making group decisions - with the possible exception of inherently fair choice processes.

¹²⁸John Dakin, "An Evaluation of the 'Choice' Theory of Planning", op. cit.

Breton and Henning, in their presentation of a composite theory, give a list of the criteria they feel any general theory should meet.

P. P. LeBreton and D. A. Henning, Planning Theory, (Englewood Cliffs, N. J.: Prentice Hall, 1961).

The architect of a future general theory of planning may find Hoffman's selection of 22 case studies of community groups as useful raw material. The studies were compiled without trying to support any particular theoretical model about the operation of these groups; they are, therefore, quite neutral.

Harold W. Hallman, Neighbourhood Control of Public Programs: Case Studies of Community Corporations and Neighbourhood Boards, (New York: Praeger Publishers, Inc. 1971).

CHAPTER IV

THE MAKING OF INDIVIDUAL INTERESTS' PREFERENCE ORDERINGS

IV.A. Goal Fabric

IV.A.1. The Public Agency and Goal Fabrics

IV.B. A Prototype individual decision-making process

IV.B.1. Formation of Goals

IV.B.2. Identification of the system

IV.B.3. Search for Alternative Solutions

IV.B.4. Prediction of Impacts

IV.B.5. Evaluation of Alternatives

IV.B.6. Ranking the Alternatives

IV.C. Differences in Individual Preference Orderings

IV.C.1. Differences in Preference Orderings Stemming From
Differences in Actors' Views of the Universe

IV.C.2. Differences in Preference Orderings Stemming From
Actors' Different Values

IV.C.3. Ubiquity of Teleological Goal Fabrics

IV.D. Summary

Abstract

As we have defined individual interest and group, members of a group hold different values, and we need to examine precisely how the individual members of a group bring their values to bear on the development and choice of alternative courses of action. Chapter IV introduces two useful constructs which provide us with a common frame of reference for the examination of how the individual interest brings his values and his view of the universe to bear on the development of a preference ordering over the perceived courses of action. The goal-fabric is one of these constructs, and the proto-type decision-making process is the other construct.

The goal-fabric is a network describing an individual's perception of means-ends relationships. The alternative courses of action that he perceives are linked via many intermediate nodes to his highest goals. The goal-fabric represents an actor's entire potential perception of means-ends relations and thus includes more than just his rational model of means-ends; it also includes the non-rational links that he perceives. These non-rational links show us how he introduces values at various levels of his goal-fabric. Links in the lower part of the fabric denote means-ends relations which can be checked out objectively; this is the mechanistic part of the goal-fabric. Links in the upper part of the fabric denote means-ends relations which are subjective to the values of the actor in question; this is the teleological part of the goal-fabric and is as sovereign as the value system of the actor. The public agency has no basis for questioning the teleological part of the goal fabric.

In order to understand how actors arrive at different preference orderings, we need to sketch out a proto-type individual decision-making process even though our primary concern lies not with the individual's decision-making process. We need a common frame of reference for discussing how, generally, an interest develops alternative courses of action and how he brings his values to bear on the perceived alternatives.

The decision-making process is initiated with the decision to do something to influence the anticipated course of events. We postulate that the actor then goes through some or all of the following six steps: 1) formation of goals, 2) identification of the system, 3) search for alternative solutions, 4) prediction of impacts, 5) evaluation of alternatives, and 6) ranking the alternatives into a transitive preference ordering.

Differences in different actors' resulting preference orderings stem from differences in actors' goal-fabrics, and they fall into two categories: 1) There are those differences in the mechanistic part of the goal-fabric which have nothing to do with the particular values that an individual interest holds. These differences can, at least conceptually, be

resolved by additional information. 2) There are those differences in preference orderings that result from the fact that the actors in question hold different values; they reflect differences in the actors' teleological parts of their goal-fabrics. We observe that no amount of additional information will resolve these differences.

As we have defined an actor's perceptions of means-ends relations, every actor, with the exception of the public agency, has a goal fabric with a teleological part to it. The public agency thus has to expect to be faced very frequently with differences in preference orderings between members of a group which cannot be resolved by finding additional information.

To provide a common frame of reference for examining how an actor brings the values and the view of the universe of his constituent interest to bear on decisions, let us in the first two sections of this chapter look at two useful constructs: the goal fabric and the proto-type decision-making process. These two constructs are presented not so much for their own merit as for the fact that they provide us a meaningful context for discussing, in the third section of this chapter, the types of differences that arise in actors' preference orderings.

IV.A. Goal Fabric

The goal fabric is a network describing an actor's perception of means-ends relations.

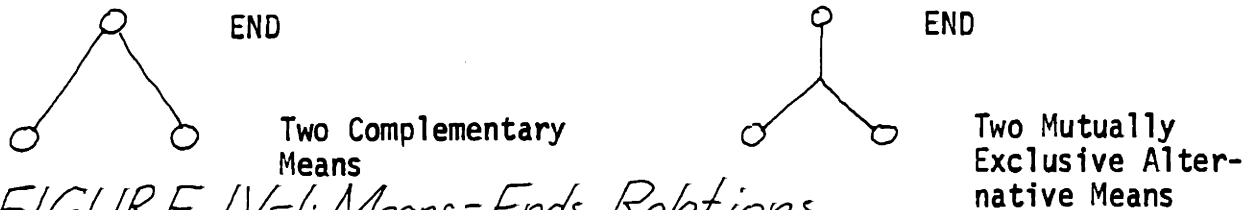


FIGURE IV-1: Means-Ends Relations

The alternative courses of actions that he perceives are linked¹ via many intermediate nodes to his highest goals. The goal fabric thus is

¹This conceptualization of an actor's perception of means-ends relations between actions and goals is somewhat different from other such constructs. No distinction is made, at this point, between different kinds of links - namely between links which depend directly on the interest's value system and the links which are perceived by any actor, no matter what value system he embraces - because we are viewing the whole goal fabric from the point of view of one actor. Once we get to compare the goal fabrics of different actors in Section C of this chapter - or at least their respective preference orderings - we will take a closer look at the types of links between nodes.

For a thorough exploration of the goal fabric concept which recognizes different types of links, see Manheim, M.L., and Decisions in Complex Problems, Professional Paper P67-24, (Cambridge; Dept. of Civil-Engineering, M.I.T., 1968).

meant to represent an actor's entire perception of means-ends relations.

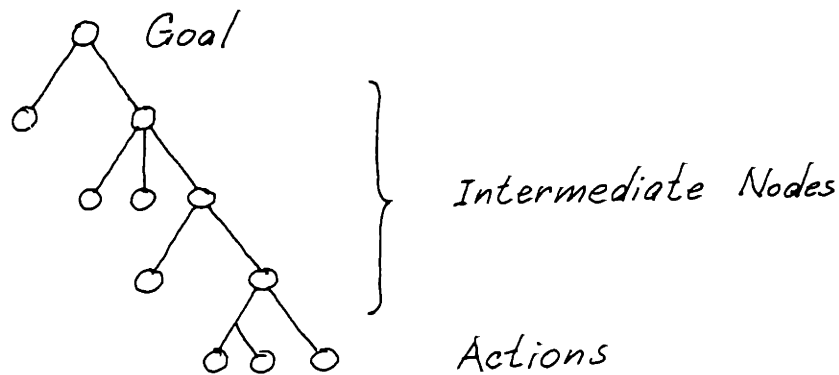


FIGURE IV-2: Goal Fabric

Planners normally give some expression to their view that there are different levels of specificity - as well as different degrees of practicality - to this continuum of nodes. Hill, for example, categorizes goals into ideals, objectives, and policies. They represent directions, regions, and points in the value space respectively.²

A goal which an actor specifies explicitly as a goal of his actions, however, almost never is an end in itself. Most likely it is a means for a further - and therefore higher - end. The terms "goals" and "actions", and even "means" and "ends", thus are not absolute concepts; they are strictly relative terms and we might better just call them nodes. The top-most node that we can identify, of course, still can be called a goal, and the very bottom nodes do denote actions. A system of notation has to recognize that some alternative means are mutually exclusive and that some means may serve as instruments for achieving more than one end.

²Morris Hill "A Goals-Achievement Matrix for Evaluating Alternative Plans", Journal of the Am. In. of Pl., XXXIV, (January 1968).

An actor conceivably perceives, in this fashion, a network or fabric of means-ends related nodes. No matter how extensive the fabric that he perceives is, however, it constitutes only fragments of the "entire," potentially conceivable network. To construct a goal fabric takes time, energy, knowledge about feasible alternative means for reaching a given goal, and information about the impacts of each of the alternative means. An actor has necessarily limited resources of this nature and thus has to settle for an incomplete goal fabric. In fact, since we may assume that the expenditure of additional resources by an actor can always produce an expansion of the goal fabric, we have to accept the fact that there really is no such thing as a complete goal fabric.

By expressing an actor's perceptions of all relevant means-ends relations, his goal fabric constitutes the graphic expression of his values and of his view of the universe.³

An actor's values are expressed in the goal fabric in two ways. First, his top goals - provided he traces his goal fabric to a sufficiently high level - constitute his goals, wants' desires, wishes - i.e. they constitute some of his values. Efforts to articulate the top goal usually produce such goals as "happiness", "fulfillment", "greatness", etc.; they do not lend themselves to examination for their validity. Examining the goal fabric one or two nodes below this kind of completely subjective goal is interesting. Linkages to these nodes attempt to define what constitutes "happiness", "fulfillment", "greatness", etc.; this is the domain of philosophy. Planners or at least planning students - at one time or another climb up through the nodes and linkages into these heady reaches of a goal fabric in an effort to define a very high level goal which is

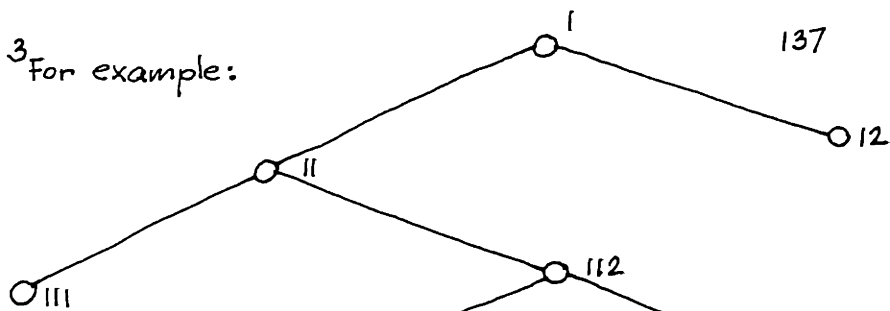
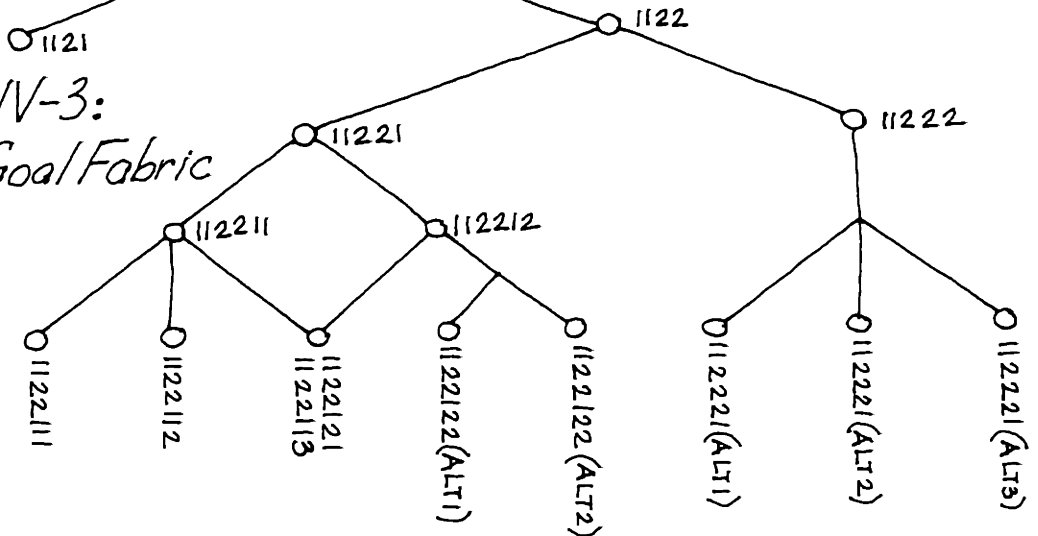


FIGURE IV-3:
Example Goal Fabric



- 1 : happiness
- 12 : work in a socially "useful" profession
- 11 : provide security for the family
- 111 : create an adequate estate
- 112 : enhance employment opportunities
- 1121 : improve job qualifications
- 1122 : improve access to a variety of employment centers
- 11221 : improve local transportation system
- 11222 : move to more central location
- 112211 : obtain commuter express bus service
- 112212 : improve the network of roads linking the local communities
- 112221 (ALT 1) : move to community A
- 112221 (ALT 2) : move to community B
- 112221 (ALT 3) : move to community C
- 1122123) : reserve one lane of traffic on all critical links (bridges, tunnels, and on other congested pieces of road)
- 1122121) : for buses

Node 1122113, 1122121 represents a means which serves two purposes, (112211 and 112212), i.e. two ends. Nodes with branching links are used here to denote mutually exclusive means for achieving an end; e.g. nodes 1122122 (ALT 1) and 1122122 (ALT 2) represent two alternative means for achieving 112212.

See also Myrdal, Gunnar Value in Social Theory, (New York, Harper, 1958), p.71, and Objectivity in Social Research, (New York, Pantheons Books, 1969), Chapter III.

not entirely subjective and which has meaning for many - if not all - people. This kind of an exercise usually serves to demonstrate that within culturally set limits⁴, actors can legitimately subscribe to completely different versions of "Happiness is ..." models.⁵

Second- some of the intermediate nodes in the goal fabric may represent more than means to further, and therefore higher, ends; they may also have some inherent value for the actor.

An actor's view of the universe is essentially his understanding of the alternative and/or complementary means for achieving each end in the chain of means-ends relations.

The actor's view of the universe tells him - at least potentially - how his specific, concrete, operational actions that he executes are linked - through various intermediate nodes - with his ultimate, highest - and necessarily one hundred percent subjective - goal(s) in life. Mumford suggests that our ability to control our destiny depends to a considerable degree on the estimate we have of ourselves.⁶ The goal fabric is an expression of how we perceive the world, our place in it, what we aspire

⁴i.e. within the limits of the group's cultural values.

⁵One very high level goal- which is less subject to the criticism that it rests on an individual's personal values than any other high level goal that the author has ever come across, is a goal advocated by Kevin Lynch in his urban design courses at M.I.T.: "individual development".

⁶As quoted by Charles Blessing in "Perception of Planning", J.A.I.P., XXVI, February, 1960, p.4 from "Prospect", Man's Role in Changing the Face of the Earth (International Symposium; co-chairman Marston Bates, Lewis Mumford, and Carl O. Sauer), published for the Wenner-Gren Foundation for Anthropological Research and the National Science Foundation (Chicago: University of Chicago Press, 1956).

to, and how we can reach our dreams. The linkages in the upper part of the goal fabric are the explicit expressions of the individual interest's likes and dislikes; they define what - for example - constitutes happiness for the particular interest in question. Unlike the linkages in the lower part of the goal fabric which show the rather mechanical, and therefore objectively testable, means-ends relations between nodes, the linkages in the upper part depend entirely on the interest's internal, and therefore subjective, means-ends structure. Since this part of the goal fabric constitutes the definition of the interest's highest purpose we shall call it the teleological part, - set off against the lower, or mechanistic, part - of the goal fabric.

Definition: mechanistic goal fabric

The mechanistic goal fabric is that part of an individual interest's goal fabric which consists of means-ends relations that are (perceived to be) completely independent of the particular interest's values; they represent linkages of a mechanical nature.

Definition: teleological goal fabric

The teleological goal fabric is that part of an individual interest's goal fabric which consists of means-ends relations that embody, at least in part, the interest's ultimate goal or purpose.

The teleological goal fabric depends on, and is an expression of, the particular interest's value system.

IV.A1: The public agency and goal fabrics

While implications of comparing different goal fabrics will be examined in Section C of this chapter, a couple of important points need to be brought out here.

The public agency may have its view of the universe and therefore its mechanistic goal fabric, but, as we have defined the public

agency⁷, it cannot have a teleological goal fabric. Since this can be deduced directly from Assertion # 1, we need not label this observation an assertion.

Observation # 13: While every interest has a teleological goal fabric, a public agency never does.

The public agency has to be ever watchful in how it goes about in helping the community analyze problems and develop alternative courses of action; it is quite easy to inject value-laden perceptions. The public agency's tasks may involve the handling of objective data, but its mandate cannot be carried out without making many value-laden decisions along the way. Chernoff and Moses' text on decision-making in the face of uncertainty⁸ deals with the fact that data cannot be analyzed by the professional in the abstract; rather, he studies them so that he may make more enlightened decisions.

For all practical purposes, we should not think of completely value-free facts at all, with the exception of facts relevant to a specific issue. Values enter into the determination of what constitutes a fact⁹, what facts need to be sought, etc.

The professionals in the public agency are expected to make a contribution to the solution of problems. But, besides proposing solutions they also must raise some of the questions which define the problem; and this

⁷See Assertions # 1 and # 2 in Section B3 of Chapter I and Section A2 of Chapter II, respectively. Decision-process criterion # 2, "identification of applied values" also bears on this.

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⁹Abraham Kaplan, The Conduct of Inquiry (San Francisco: Chandler Publ.Co. 1964) p.384

cannot be done without calling on value systems.¹⁰

Although actors' goal fabrics are bound to be different - first, because they may have different views of the universe and therefore will also have mechanistic goal fabrics which differ and, second, because their teleological goal fabrics rest on the innermost, subjective purposes, - there are nevertheless sure to be some similarities in their goal fabrics.

We can expect to find similarities in the mechanistic fabrics insofar as the actors agree on the applicability of the relevant prediction models. This is really more a sharing of a view of the universe than a sharing of values.

What is even more important, however, is that we can also expect similarities in actors' teleological goal fabrics. These similarities are a reflection of the group's cultural values and arise in several ways: First, the interests being represented by the actors participating in the group decision-making may just happen to share some values¹¹. Second, they may have had occasion to work out conflicts between themselves in the course of jointly working for various common purposes in the past, and they may, as a result have adopted certain norms and standards affecting their

¹⁰ Gunnar Myrdal quotes Louis Wirth as having said "Without valuations we have no interest, no sense of relevance or of significance and, consequently, not object". He states his own "value premise" thus: "... without questions there are no answers . And the answers are preconceived in the formulation of the questions. The questions express our interests in the matter. The interest can never be purely scientific. They are choices, the products of our valuations".

Myrdal, Gunnar, Value in Social Theory, (New York: Harper, 1958: p.51)

¹¹ The example of such a shared value which was used in Chapter I was education.

behavior in the group context. They thus may have developed their own definitions of what fairness, justice, and equity mean to them. Third, all of the various actors may be part of a much larger society than the group which has formed to pursue an immediate purpose. That larger society may have a culture which consists, in part, of a set of values which all of its members share.

As long as an interest's values, and therefore its teleologic goal fabric, does not violate the group's cultural values, the public agency cannot judge one teleologic fabric "right" and another "wrong"; in fact, the agency cannot even judge one "more right" than another. The cultural values on the rules of each of the various games¹² by which each actor pursues his own ends, constitute probably the most important sharing of values.

Observation # 14: The teleological goal fabrics of the members of a group represent the interests' own values; these fabrics may differ from each other except for those linkages representing cultural values.

Assertion # 9: Within the limits of a group's cultural values, each interest's teleological goal fabric is sovereign.¹³

Except for checking an actor's teleologic goal fabric for consistency with the group's cultural values, the public agency really has no (legitimate)

¹²These games are in reference to game theory in general, and to Norton Long's model of group decision-making specifically.

Long, Norton. "The Local Community as an Ecology of Games", American Journal of Sociology, LXIV (1958), Pp. 251-261.

¹³Recall that we are pursuing the matter from the point of view of the public agency. From the point of view of an individual interest, another interest's teleologic goal fabric is not quite as sovereign because he has a (subjective) value basis from which to evaluate another interest's fabric.

basis for questioning an actor's teleologic fabric. Herbert Gans¹⁴ puts it another way when he argues that "... unless there is a strong case to the contrary, people are entitled to live in any way they choose..."

IV.B. A prototype individual decision-making process

An actor will engage in a planning process under one of two conditions: 1) He does not like the events which he is anticipating as part of the on-going course of events.¹⁵ Or, 2) without anticipating any specific problem, in the course of events, he feels that, in general, he fares significantly better if he tries to influence the course of events than if he does not try.¹⁶ To have control or at least some influence - over his destiny means that he must have the option of

¹⁴Gans, Herbert, People and Plans: Essays on Urban Problems and Solutions, (New York; Basic Books, 1968)

Darryl Baskin writes a provocative critique of our (American) pluralism which lies at the root of this statement and assertion # 9.

Baskin, Darryl, "American Pluralism - Theory, Practice, and Ideology", Journal of Politics, (February, 1970).

¹⁵Though the words are alarmingly non-technical (... does not like ...), this is a reasonable definition of the ubiquitous concept of "problem". Anticipation of events is more important than the current state because time keeps running, and since planning and acting take time, there really is no way of influencing the current state. We shall, for simplicity's sake, consider the anticipated continuation of a state - during the next increment of time - an "event" even though it is more of a non-event.

¹⁶Realizing that he has to expend resources to influence the course of events, an actor not only has to feel that the course of events will have an outcome more favorable to him if he tries to influence it than if he doesn't, he also has to feel that, after deducting the cost of the planning effort, in terms of all resources spent, he will still be ahead. This is what is meant by "significantly" better. "In general", refers to the fact that an actor 1) is willing to average out the net effects of his planning efforts and 2) may perceive, and take account of, a probabilistic distribution of costs and benefits of undertaking a planning effort. Thus, in the case of an actor developing specific figures for 1) costs of particular planning efforts, 2) benefits of possible courses of action, 3) uncertain-

intervening in the course of events; he - or someone on his behalf - must be able to decide what his options of intervention are and which one he should exercise. In some contexts there is always the question of whether planning consists of making provisions for meeting the inevitable or whether it consists of taking the initiative to bring about a desired state of affairs.¹⁷

Not every actor makes the conscious decision that he will begin to make plans, but once he takes steps to influence the course of events, we can be sure that he has gone through some version of a planning process - though it may have been a very abbreviated one.¹⁸

Many different models of planning and problem-solving processes are available, and many of these were reviewed in Chapter III. The six-step

ties in prediction, and 4) probabilities of random events - the concept of "feeling that it will, in general, fare significantly better" translates into the concept of expected benefit-cost or, if utility units are used, expected utility.

¹⁷Hans Blumenfeld, writing of Adam Smith's "Invisible Hand", the hand of Mammon, - i.e. the market forces - suggests that cooperation with the inevitable is not a contemptible planning practice, that only a fool would refuse to cooperate with the inevitable. It is crucial, however, to determine what is and what is not inevitable.

Hans Blumenfeld "The Role of Design", J.A.I.P., XXXIII, September 1967, pp. 304-310.

¹⁸John Dakin in his critique of the "Choice" Theory of Planning points out the difficulty of proving that one actually has the freedom to make the choice between planning and not planning because, in our culture, planning is accepted as being inherently justified.

John Dakin "An Evaluation of the Choice Theory of Planning", op. cit. p. 21.

planning process we describe here is a prototype because just about any process used by any individual actor can be seen as a variant of this one¹⁹.

The six steps are:

- 1) formation of goals,
- 2) identification of the system,
- 3) search for alternative solutions,
- 4) prediction of impacts,
- 5) evaluation of alternatives, and
- 6) ranking the alternatives.

The way actors go about solving their problems is rarely a matter of neat, sequential steps, and, in fact, there is no real reason for it being one. The six steps are the logical sequence of deducing and selecting progressively more specific options. However, the logical sequence is not the only influence on the process; there are other events taking place which may not stem from the problem-solving effort but which may bear on it nevertheless. Alternatives may be identified long before the goal is made explicit, etc. Not following the logical sequence does not necessarily undermine the process, provided the process is iterative and thus has the

¹⁹Descriptive decision-making models, however, lend themselves less readily for direct comparison to this (and other) prescriptive decision-making models. For example, Lawrence Mann (Mann, L.D. "Studies in Community Decision-Making," J.A.I.P., XXX, February 1964, p.63), rephrased Martin, Munger, et al's (Martin, Roscoe; Munger, Frank; Burkhead, Jesse; Birkead, Guthrie S.; et al, Decisions in Syracuse, (Bloomington, Indiana: University of Indiana Press, 1961, pp. 311-318) decision-making process, derived from the study of twenty-two community decisions in Syracuse, into the following steps.

- | | |
|--------------------------|---------------------------|
| 1) initiation | 5) negotiating influence |
| 2) expertise | 6) transmitting influence |
| 3) publicity | 7) governmental action |
| 4) reaching influentials | |

actor think his way through the second step at least once after he has dealt with the first step - and at least once through the third step after he has dealt with the first two steps, etc. The important thing, of course, is that each step gets to make its contribution to the process, i.e. that one step's output, which is potential input for another step, gets used.

Observation # 15: The individual decision-making process includes six steps which, if they are not executed in sequence, should be carried out in such an iterative sequence that, with the benefit of hindsight, it can be demonstrated that they affected each other as if they had been executed in sequence.

IV.B1. Formation of goals

The definition of a problem, quite apart from implementing a course of action to solve the problem, may contribute very substantially to a solution.²⁰

Whether an actor initiates a planning process in order to meet some perceived problem or whether the process is aimed at the more vague task of giving general direction to the course of events, the first step - insofar as one can speak of a first step in a process which, in practice, may start with almost any of the steps - consists of specifying one or several goals.

²⁰For example, with the advent of widely available electronic computers during the 1950's and 1960's, many businesses were eager to use them only to find out that after they had analyzed their operation very thoroughly - for the purpose of automating a certain operation - that they then, i.e. after the analysis, understood the operation so much better that they could make substantial improvements in it without using computers.

Albert Einstein put it this way: "The mere formulation of a problem is far more often essential than its solution, which may be merely a matter of mathematical or experimental skill. To raise new questions, new possibilities, to regard old problems from a new angle requires creative imagination and marks real advances in science".

as quoted in The Journal of Creative Behavior, Vol. 4, No.1, 1970, p.4.
"A problem well-defined is half solved".

Specifying a goal amounts to identifying some node in his conceptual goal fabric for the purpose of filling in that portion of the goal fabric which connects to, and is below, the thus identified goal. We cannot expect the actor to put his finger on the very highest node in his goal fabric. The highest node is bound to have a very vague label, such as "the good life" or "happiness". The goal he specifies has to be some lower node which is part of, or leads to, his teleologic goal fabric.

If the actor is thorough, he will also specify a measure of goal achievement. His goal is not operationally defined unless he spells out exactly how much of the goal he wants. In fact, unless he does this, he may find himself in the position later, after he has implemented his course of action, of not knowing whether he failed or succeeded.²¹

If, for example, his goal is to save more money in the coming year, specifying a measure of goal achievement simply means to specify how much more he hopes to save. If, however, it is his goal to provide his family with better security, specifying a measure of goal achievement amounts to describing his perception of the goal fabric; i.e. what does he understand under "security for the family". The actor in the example of the goal fabric discussion (Section A of this chapter) perceives the creation of an "adequate" estate and the "enhancement" of his job opportunities to constitute the main factors of his family's security. Obviously,

²¹ Webster's New Collegiate Dictionary says "goal implies struggle and endurance of hardship but cessation of effort at attainment". - Obviously, there cannot be any ambiguity in an actor's mind about having reached - or not having reached - his goal if he is to "cease struggling at attainment".

Webster's New Collegiate Dictionary, (Springfield, Massachusetts; G. and C. Meriam, Co., 1956)

this actor has to continue tracing out his goal fabric still further to define his perception of "adequate" and "enhancement" before he has an operationally defined goal.

Definition: operationally defined goal

A goal is operationally defined if there is no room for possible disagreement as to whether the goal in question has been reached or has not been reached.

IV.B2. Identification of the system

Formulating a goal, and specifying the level of desired goal achievement, anchor the actor's goal fabric - which, typically, is not explicitly defined but is only a conceptual construct of his perceptions. By specifying a goal the actor accepts, implicitly or explicitly, the hypothesis that the goal fabric above the node is valid, that the node in question constitutes a means to his higher ends. What now needs to be done is to fill in the nodes and links in the fabric which connect to, and lie below, the specified goal. To do this the actor needs to identify all of the elements which have a potential bearing on his achieving the specified measure of goal achievement; the task amounts to four sub-tasks:

- a) The relevant empirical system has to be bounded: all elements which either affect the goal, or which are affected by any of the contemplated actions, have to be identified.
- b) The mechanics of the system have to be learned: The means-ends relationships and, when applicable, the cause and effect relationships in the process of bounding the empirical system have to be postulated. This provides the necessary knowledge for predicting the consequences of any contemplated action.
- c) Next, the variables in the thus constructed system have to be evaluated: The range over which the variable elements in the system can vary has to be identified, and each variable has to be categorized according to 1) its strategic importance for its potential contribution to achieving the goal and 2) its manipulability by the actor.

- d) Finally, the constraints have to be identified: The variables which are strategic but cannot be manipulated by the actor constitute the constraints; as the actor identifies each constraint he also needs to think of what it would take to get a relaxation of it, should that prove necessary.

IV. B3. Search for alternative solutions

The entire job of filling the goal fabric from a given goal on downward is a creative effort; in fact, as the actor gets toward the lowest levels in the fabric with the identification of nodes and linkages, creativity comes to play an increasingly important role. He has to generate alternative solutions by putting together courses of action consisting of manipulating strategic variables. If not enough of the strategic variables are manipulable, he may address his actions to relaxing some of the constraints, i.e. to make some of the non-manipulable, strategic variables manipulable.

Just how he invents solutions, i.e. how he conjures up courses of action is an art in itself; we cannot pretend to deal with it here in a paragraph or two.²²

Many of the techniques used by designers of courses of action focus on overcoming the tendency to see problems, and therefore solutions, as

²²This is not to say that the creative process is not being researched in the hope of shedding light on its working. See, for example:
 Industrial Research Institute, Inc., The Nature of Creative Thinking, a monograph, 19 (New York University, N.Y., 1953)
 John W. Haevele, Creativity and Innovation, (N.Y.: Reinhold Publishing Corporation,)
 Gordon, William, J.J., Synerctics; The Development of Creative Capacity, A New Method of Directing Potential to the Solution of Technical and Theoretical Problems, (Harper and Row, 1961)

stereotypes;²³ these techniques are aimed at freeing the designer to perceive problems in new ways and thus to innovate. Most, if not all, of the techniques in the generation of alternatives rely on the designer's intuitive thought processes. While the intuitive processes are not a complete mystery, they do take place in the subconscious. The designer cannot really control these processes; all he can do is to try to facilitate these processes. Talcott Parsons warned in 1938 against accepting broad, empirical generalizations; the very fact that they sound compelling by their ubiquitous nature lets them throttle new, and maybe better ways of looking at the problem.²⁴

At the end of this step the actor winds up with at least one, and hopefully several, possible solutions. Each alternative solution consists of one action or a course of action.

Definition: Alternative course of action
An alternative course of action (or an alternative) is one of several sets or sequences of actions which an actor believes:

- 1) will serve to attain his goal,
- 2) is feasible to carry out.

A course of action does not necessarily constitute a solution; it is simply a description of the next thing the actor should do.

²³For example, the "deferred-judgment" principle is aimed at encouraging a free, spontaneous generation of alternatives by eliminating those of the designer's inhibitions which are due to anticipated criticism.

²⁴He warned that statements such as, for example, "social processes are, in the last analysis, determined by economic factors" embody generalized judgments about very complicated and ill-understood phenomena. He likened it to the statement: "the physical universe as a whole is running down"...

Talcott Parsons "The Role of Theory in Social Research" , American Sociological Review, III, 1938, pp.13-20.

IV.B4. Prediction of impacts²⁵

The impacts of each of the contemplated sets of actions have to be predicted next. This involves using whatever hard and fast prediction models that the actor has available, as well as making use of his hunches, and making subjective judgments. Not surprisingly, different actors will make different predictions.²⁶

IV. B5. Evaluation of alternatives

The actor next evaluates the consequences which he predicts for each of the contemplated alternative courses of action. He evaluates the actions by projecting his prediction of the actions' consequences onto his own teleologic goal fabric, i.e. on his values.

An actor with a large number of goals, of course, has to evaluate potential outcomes along many dimensions.²⁷ The methodical individual decision-maker has means for finding a common unit of measurement for

²⁵"Prognosis" is what Gunnar Myrdal calls predicting the resulting course of events - for each of several alternative courses of action.

Myrdal, Gunnar, Value in Social Theory, (N.Y., Harper, 1958)

²⁶Britton Harris argued a decade ago that professionals ought to concentrate their efforts much more on researching, and displaying to the public, the implications - i.e. the impacts - of alternative courses of action.

²⁷One example of a single decision-maker problem-solving process which takes many dimensions into account is developed by James Vedder.

James Vedder, "Planning Problems with Multidimensional Consequences" Journal of the American Institute of Planners, XXXVI, (March, 1970), pp.112-119.

evaluating the alternatives in respect to all of his values.²⁸

IV. B6. Ranking the alternatives

After an actor has evaluated the alternatives that he perceives, he arranges them in a one-dimensional array ranking them from most preferred to least preferred.

Ranking a large number of alternatives is a formidable task. He performs it best by making pairwise comparisons. Because we must assume that his preferences are transitive²⁹, he need not make all possible pairwise comparisons to get a complete ranking.³⁰

His preference for one alternative may be strong, e.g. $ALT1 > ALT2$; his

²⁸There are two kinds of issues that have to be addressed here: First, is the value system which is being invoked internally consistent? (In the case of the individual interest - as we have defined it - it is.) Second, is it within the relevant actor's means to go through the necessary exercises to reduce his various measures to a single, commonly applicable unit of measure?

Vedder's method allows the decision-maker to make the most of relatively crude utility measurements which, in turn, allow him to make multi-dimensional comparisons between alternatives.

James Vedder, "Planning Problems with Multidimensional Consequences" J.A.I.P., XXXVI, (March, 1970), pp. 112-119.

²⁹See Section B1 in Chapter III for a discussion of transitivity, or the majority paradox.

³⁰If an actor has, for example, five alternatives $ALT1, ALT2, \dots, ALT5$, he can compare them pairwise, and as a result of the pairwise comparison he can rank the entire set. Say he has the following pairwise preferences:

$ALT1 > ALT2$
 $ALT2 > ALT3$
 $ALT5 > ALT2$
 $ALT4 > ALT3$
 $ALT5 > ALT1$

$ALT2 > ALT4$, then he can conclude the following preference ordering over the five alternatives: $ALT5 > ALT1 > ALT2 > ALT4 > ALT3$, where $ALT5$ represents his first choice and $ALT3$, his last.

preference may be weak, e.g. $ALT1 \geq ALT2$; or he may be indifferent between them, $ALT1 = ALT2$. These different kinds of preferences make for entirely different relative relationships between alternatives - in the eyes of the actor - and thereby govern the actor's subsequent behavior.³¹

It is not always possible for an actor to establish a clear preference of one alternative over another, and in some cases the actor can only bring himself to establish a preference ordering over a partial set of all alternatives. He may thus produce an incomplete ordering.³²

One short-cut method which is frequently used by actors, is to produce a one-dimensional, or "lexicographic", rank ordering.³³

IV. C. Differences in individual preference orderings

We are ready now to move one step closer to group decision-making by looking into the obstacles a public agency would have to overcome to aggregate the disparate choices of different actors in the group or to get

³¹For the actor to establish a preference ordering, he has to perceive an asymmetrical, non-symmetrical, or anti-symmetrical relationship.

³²A partial ordering is "reflexive, antisymmetric, transitive, and non-connected".

For a treatment of preference orderings see
 Russell L. Ackoff, Scientific Method: Optimizing Applied Research Decisions, (New York; John Wiley and Sons, 1962), pp.187-189.

³³"Lexicographic" ordering is a rank ordering where the actor looks at only one of the several dimensions of each of the alternatives and ranks them thus. If two alternatives rank the same along this dimension, the actor looks at one other dimension to break the tie between the two alternatives, etc.

See John S. Chipman "The Foundations of Utility" Econometrica, April 1960.

the group to make a single, collective choice.

If all the interests in a group consistently agreed on what collective courses of action they ought to take, we would have little reason to call them a "group"; if they consistently agreed on courses of action, we probably could not show that they subscribed to different values. Observation # 2,³⁴ in effect, reserves the term "group" or "community" for those decision-making entities which do not have one single, consistent set of values. In Sections A and B of this chapter we sketched out two conceptual constructs which give us a framework for discussing the process by which each actor goes about deciding on a course of action in his effort to further his interest.

Differences in preference orderings stem from differences in actors' goal fabrics. Since we are interested in learning what roles a public agency might play in resolving these differences, or better yet, preventing them from occurring in the first place, we need to know the nature of these differences. One simple classification suggests itself: 1) there are those differences which stem from differences between actors' views of the universe and 2) there are those differences which stem from differences between actors' values.

IV. C1. Differences in preference orderings stemming from differences in actors' views of the universe

The mechanistic part of an actor's goal fabric is shaped by his view of the universe, that is, by 1) his perception of the range of options that

³⁴Section B2, Chapter II.

are available, 2) his prediction models, 3) his information base, and 4) his estimates of the probabilities with which uncertain events will occur.

Differences in perceived options

If each of two actors perceives, and therefore ranks, a different set of alternatives, the public agency most likely will be at a loss as to how to aggregate the two preference orderings. In fact, if the two sets of alternatives are sufficiently different, the agency will have no basis for comparing the rankings.

One problem may lie therein that one actor feels that a particular alternative is feasible, and that it therefore represents a real option - while another actor considers the alternative in question infeasible. This phenomenon is often referred to as a discrepancy in actors' horizons.

Another problem which belongs into this same class lies therein that actors may understand quite different concepts under one and the same name.³⁵ It may thus appear on the surface that they are talking about the same alternative when, in fact, each means something quite different. This condition is pathological; it is undesirable no matter whether the actors in question agree or disagree. If they agree, chances are, their agreement is short-lived and will be followed by disappointment, disillusion, even

³⁵ For instance, one actor may assume that "rehabilitation of housing" means that no housing will be demolished while another actor may have in mind "rehabilitation" as defined by the Department of Housing and Urban Development which allows for a considerable fraction of the housing in a "rehab" program to be demolished and replaced. Thus, the fact that these two actors might agree on the predicted consequences of demolition and of offering low-cost mortgages to home owners, does not come into play if they have different perceptions of what a "rehab" program will consist of.

mutual feelings of deceit when each one comes to realize that the other meant something quite different from what he meant - when they "agreed" on a course of action. On the other hand, if they disagree, it is entirely possible that their disagreement is a result of the fact that they attach different meanings to the same terms.

Whether actors rank a different number of alternatives, or they rank a set of alternatives which on the surface appears to be same but in fact is different, they wind up making impact-predictions, evaluating, and ranking dissimilar sets of alternatives. Even if the actors in question had the same goal and subscribed to the same values, they probably would find themselves disagreeing about the desirable collective course of action.

Different prediction models

Differences between actors' preference orderings can arise if actors predict different impacts to result from a particular action, i.e. actors may subscribe to different prediction models.

Even in the mechanistic part of the goal fabric there may be outright disagreement between actors about the existence of a particular linkage between nodes. One actor may perceive a particular means-ends relationship between two nodes while another actor may not believe that relationship to exist. He may perceive the proposed action to be unrelated to the aspired goal; he may even perceive the proposed action to have the opposite effect from the desired one, or he may perceive the actual means and ends roles of the proposed nodes to be reversed.³⁶

³⁶Manheim and Hall make a distinction between value-dependent and value-independent linkages at all levels of the goal fabric.

Manheim and Hall, Abstract Representation of Goals, op. cit.

Prediction in all but the most simple circumstances involves uncertainties. Some actors may have to rely more on their personal hunches than others, but even the experts in a particular field, such as housing, poverty, etc. have to concede that they have few, if any reliable prediction models.

Lay actors, as well as professionals, rarely agree on the efficacy of a particular prediction model; consequently, differences in preference orderings which result from different prediction models occur very frequently.³⁷

Different data bases

Another kind of difference results if actors apply the same prediction models to different data. If, for example, one actor involved in housing has information which leads him to believe that the vacancy rate in the city is less than two percent, while another has information that leads him to believe that the vacancy rate is over five percent, they will, of course, be perceiving two entirely different "housing problems", and they will consequently be designing different courses of action.

One common situation which belongs into this class stems from the fact that the professionals, i.e. the public agency, always has access to much more information than do the lay actors. This can result in the unhealthy situation where the public agency - though dedicated to help the various interests in the community solve their problems - perceives

³⁷One example of this can be observed in some communities which have no expressways now but for which some are planned. Some people feel that the expressways will improve the community's fiscal position because they will stimulate new industry and commerce which, in turn, will increase the city's tax base. Others, however, feel just as strongly that the clearance of land and the removal from the tax rolls of land needed for the roads will not be overcome by induced investment for a long time - if ever.

quite different problems. Lay and professional actors thus frequently talk right past each other.

Different probability distributions

Although all actors may agree that the future course of events will follow one of a number of events, they may differ in their estimates of the probabilities with which each of the various possible outcomes will occur. A contemplated action may be perceived to have more than one possible consequence. If some of these consequences are mutually exclusive, an actor may approach the task of predicting the action's consequences as one of assigning a distribution of probabilities for the possible consequences.³⁸

All four classes of differences in actors' views of the universe - i.e. range of options, prediction models, information bases, and probability distributions, - have a direct bearing on an actor's problem-solving process. They affect the kind of goal he formulates, how he identifies the relevant system, the kinds of alternatives he generates, and how well he predicts impacts of each alternative.³⁹ The nodes and links he tries to identify here, exist in fact. It is not so much a matter of him subjectively creating this mechanistic part of his goal fabric as it is a matter of him trying to objectively capture the means-ends relationships which could - given enough time and resources - be proven to be right. While he may have to use his subjective judgment for making estimates as a short-cut to

³⁸ Say that, for example, one actor predicts that alternative ALT1 will have one of two consequences: IMP1 or IMP2; say he also feels sure that these are the only possible consequences and he assigns probabilities p_1 & p_2 respectively to the two consequences, e.g. $p_1 = 1/2$; $p_2 = 1/2$. If now another actor also predicts that alternative ALT1 will have either consequences IMP1 or IMP2 but assigns them probabilities $p_1 = 1/4$, and $p_2 = 3/4$ respectively, we have a special case of actors perceiving links in the mechanistic part of the relevant goal structure differently.

³⁹ These are (See Section B of this chapter) steps one through four of the

lengthy investigations, his values, per se⁴⁰, do not come into play in causing the differences that have been discussed here. What does come into play is the incompleteness or disparity of information available to the group's members.

Observation # 16: Differences in actors' preference orderings stemming from differences in the mechanistic parts of their respective goal fabrics can, at least conceptually, be resolved by providing more, or more perfect, information.

IV.C2. Differences in preference orderings stemming from actors' different values

Actors' goal fabrics not only differ in the lower, mechanistic region of means-ends relationships, they also differ from each other in the upper regions where the linkages between nodes depend entirely on his value system. An actor's own subjective likes and dislikes determines this, the teleological part of the goal fabric. Note that this is not to say that an actor cannot be wrong in this part of the goal fabric. It's just that we cannot appeal to a structure of nodes and linkages which is demonstrably "correct", - as we can in the case of the mechanistic part of the goal fabric. The actor's own values are the final authority; to call a linkage "wrong", we would have to persuade the actor that he really would not

prototype decision-making process. Looking at a rougher-grain decision-making process, namely one which divides the activities into just two parts - search and choice - these four steps constitute the process of search, and the remaining two steps (evaluation and ranking of alternatives) constitute the process of choice.

⁴⁰The values we make reference to here are the values which differentiate him from other actors and thus make him an individual interest. This, then, is not to say that he performs these steps in forming his goal fabric without recourse to a value system. The notion that this can be done without making some value assumptions has been thoroughly discredited.

enjoy a particular goal or node, should he achieve it, - as much as he thinks he would enjoy it.⁴¹

Though we have been concentrating, and will continue to concentrate, on each actor's own needs and wants, there is no reason to presume that an actor has needs and wants only in the most selfish sense of the word; the Cahns and others argue that the typical group member has considerable foresight and concern for the group.⁴² It is not obvious exactly where a goal fabric stops being mechanistic and starts being teleological.⁴³ One way of determining whether a particular set of nodes and the linkages between them is mechanistic or teleological is to imagine that two actors

Decisions which ostensibly deal only with facts may well be dependent on values. For instance, if the "facts" themselves are not influenced by values, then decisions about using or not using, adding to or abbreviating, keeping or amending the available data tend to be influenced by an individual's own values - even when that individual's role in the decision-making is a strictly technical one.

⁴¹The only test we can devise about his being wrong is to determine that his utility for a particular node in his higher goal fabric is - or was - different a priori of achieving that node from what it is - or will be - after the fact of achieving it. Even here it turns out, the actor is the final authority because only he can tell us that, after the fact, he has come to the conclusion that he was wrong.

⁴²The Cahns call the view that each actor works only for his most immediate, most selfish wants "the fallacy of monolithic man".

Hans Spiegel, ed. Citizen Participation in Urban Development: Vol. I, Concepts and Issues, Washington, D.C.: Center for Community Affairs, NTL Institute for Applied Behavioral Science, 1968.

⁴³Witness the vagueness of practicing planner's distinction when they try to describe the difference by talking of a hierarchy of goals, e.g. 1) ideals, 2) goals, 3) objectives, 4) policies, 5) actions. This clearly is an effort to bridge from the teleological to the mechanistic nodes, but just where the line is to be drawn tends to elude us.

disagree about the existence of the means-ends relationship between the nodes in question and then pose the question: "Could the disagreement be resolved if the two actors had perfect knowledge?" If the answer to this question is that no conceivable amount of additional information can resolve the disagreement, then the link in question is in the teleological region.

Different utilities

Most differences in preference orderings that can be traced to the actors' different value systems result from the fact that actors assign different utilities⁴⁴ to a given outcome.⁴⁵

Actors may make the same predictions about a proposed action's impacts; the predicted impacts, however, may play quite different roles in the actors' higher goal structure. If one actor perceives a particular node to be good and desirable within his goal structure; i.e. if he has some given positive utility for that outcome, and another actor perceives the same node to be bad and undesirable; i.e. he has a negative utility for the outcome, then there is no reason to suppose that one of them is necessarily "wrong"; and that after the fact he would - with the benefit of hindsight - change his mind.

⁴⁴We refer here to Von Neumann-Morgenstern utility; there is a discussion of utility in Chapter IV.

⁴⁵Here we enter the world of relativity. Actors who have different utilities for the same given outcome do not really perceive the same outcome; in fact, from the point of view of each one of them, it isn't the same outcome. An actor's utility for the outcome is, for him, part of the outcome; it is not something he attaches to a neutral phenomenon called "outcome".

Zero-sum games

In a case where each of two actors feels - rightly or wrongly - that the only way he can gain something is by having the other actor lose something, the two will, of course, not come up with the same preference ordering over a given set of alternative courses of action. This case is called a zero-sum game perception because the situation can be demonstrated very compellingly by designing a game, and making rules for the conduct of the game, which make it clear to every player that when one adds up all the winnings (positive utilities) and all the losses (negative utilities, or disutilities), of all the participating players, the sum has to be zero.⁴⁶

It is not rare to find actors in typical planning processes to perceive their relationship to be one of a zero-sum game. We have at least two reasons to be on the lookout for such perceptions on the part of actors. First, the existence of a zero-sum game relationship will frustrate almost all attempts at resolving differences in preference orderings; second most often when actors perceive themselves to be in a zero-sum game relationship, they are in error; - having partially conflicting goals is a far cry from having a zero-sum game. Because each actor represents an interest with a set of values different from that of any other participating actor, some potential conflict exists between any

⁴⁶Most parlor games are of this nature. Real-life situations are more often perceived to be zero-sum games than they really are. There usually are some possible alternatives which offer the two actors to get an outcome for which they, collectively, are better off; i.e. where the sum of losses and gains is non-zero, in fact, where it is positive. There may, however, be great disparities between the individual outcomes and may require some trading or side-payments from one actor to another to make the choice where they are collectively better off an acceptable one to both actors.

two actors. Whether the conflict will surface or remain latent depends entirely on the issues which surface and come to confront the actors in their efforts to develop and choose a collective course of action. While the real zero-sum relationship is rare, - but is frequently perceived to exist - some conflict in actors' values is the very nature of a group. There is nothing wrong with this; in fact group decision-making concerns itself with the problem of making collective decisions in the face of some conflicting values.

Hate

Another special case of differences in actors' preference ordering stemming from their teleological goal fabrics, arises when actors hate each other. In terms of goal achievement this means that one actor has a positive utility for a particular outcome because another actor has a negative utility for that same outcome.

Note that, while this situation has some of the characteristics of a zero-sum game relationship, the converse is not necessarily true; a zero-sum game relationship does not necessarily constitute a hate relationship.⁴⁷

⁴⁷ One could make similar observations about a utility function that we might call "love", where an actor has a high utility for an outcome - without necessarily knowing what the outcome is - because another actor has a high utility for that outcome. There is, however, a structural difference between this "love" phenomenon and the "hate" phenomenon. First, the love utility function can rather readily be incorporated in a direct description of an actor's utilities for outcomes by making the utility of the second (object of love) actor a part of the first actor's outcome to which he then ascribes a utility. In the hate case the feelings tend to be much stronger; in a case of vindictiveness the first actor evaluates an outcome primarily in terms of the second actor's negative utilities for the outcome, and his direct utility for the outcome per se is only of marginal interest to him. Second, sad to say, I am willing to hypothesize that the hate phenomenon has a controlling influence in an actor's evaluation more often than does the love phenomenon. Both hate and love phenomena should be kept separate from, and not confused with, outcomes.

Process

Quite apart from outcomes, i.e. ends, actors may also assign specific utilities to different processes, i.e. to means. The processes or means in question can be means for achieving a particular end or they may be the process by which the group makes its decisions.

There are essentially three kinds of cases that belong into this class: 1) nodes in the goal fabric which represent means to further ends but for which the actor also has some inherent value, i.e. some utility other than, and apart from, it being a means for the further end, 2) needs in the goal fabric which represent means to further ends and which affect the actor's utility for the end,⁴⁸ 3) activities and processes, - particularly

⁴⁸The difference between 1) and 2) is subtle but important; so let us look at a couple of examples.

Kevin Lynch tells of a good example of the first type: In a military organization, the purpose of rigid discipline, unflinching, immediate, even automatic obedience of drill commands, is the prompt execution of orders in battle. The perfectly predictable, automat-like behavior of a soldier on and off the drill-field thus is the means, and reliable execution of orders under extreme stress, is the end. We have, however, come to place some value on the means itself. When referring to the perfectly predictable, automat-like behavior of a soldier we make statements such as "that is a 'good' soldier", we may do so without making any connection to the end, i.e. the usefulness in battle of having these traits. We thus have transferred some inherent value to the node which, at one point, was strictly a means.

An example of the second type may be illustrated by an actor who has one utility for a particular end if it is reached via one means and a different utility for the same end if it is reached via a different means. For a case to fit this class, two additional conditions have to be met: a) the actor does not attach different utilities to the inherent (i.e. of the type discussed just above) values of the two means in question and b) the means by which the end is reached does not affect the end in question in any material way - other than the effect it has on the actor's utility for the end. - Say a city council debates a new and controversial traffic circulation system. Say one councillor has studied the scheme thoroughly and has heard all the pro and con arguments; say he has pretty well decided on the value he is willing to place on the new scheme. Say he now learns that the scheme was not developed by a traffic engineer but by the several municipal agencies and the many private interests who have to live with the downtown traffic day-in, day-out. If this is his only new information, and he, as a result, changes his support of the scheme one way

the processes by which the group makes decisions, settles on compromises, etc.

All four classes of differences in actors' teleological goal fabrics -, i.e. different utilities, zero-sum relationships, hate, and processes, - stem from the actors' values and, like each actor's own values, are - with the exception of the group's cultural values - not subject to review or varification.

Observation # 17: An actor is the final authority on his subjective values; therefore, differences between actors' preference orderings resulting from differences in the teleological parts of their goal fabrics cannot be resolved without at least one actor changing his values.

This means of course that values play an extremely important role, in fact, the critical role in group decision-making. It is of little help to mention it here, but it needs saying nevertheless: we do not know very much about individuals' and groups' values.⁴⁹

IV. C3. Ubiquity of teleological goal fabrics

Mechanistic means-ends relationships can never, by themselves, constitute a goal fabric.⁵⁰ Each actor pursues goals which stem from the

or another, he is doing so because the means by which the end was achieved has affected his utility for the end.

⁴⁹There are those who have argued long ago that societal values are an appropriate subject for study. Hornell Hart quotes H.W. Odum as having said: "If civilization is largely a matter of values and civilization represents the product of society's on-goings to date, and if sociology is the scientific study of society, the omission of social values assumes a larger significance than the error of pre-Copernican astronomers which assigned to the earth its wrong place in the scheme of things."

Hornell Hart "Value-Judgments in Sociology", American Soc. Review, III, 1938, p. 862.

⁵⁰This same idea was expressed in Section A1 of this chapter under Observ. #13.

subjective value system that he, and the interest he represents, subscribes to; this value system gets expressed in his design of the teleological goal fabric, particularly in the very top nodes and links.

When we combine this principle of the ubiquity of teleological goal fabrics with Observation # 17, namely that differences in actors' teleological goal fabrics cannot be resolved without at least one actor changing his values, we must conclude that there is no completely objective method by which the group can make a collective decision, or to have one made for them. This differentiates the public agency's potential role clearly from those models of professionalism which propose that "public policy can be defined as problems susceptible to 'correct' solutions, based on professional knowledge".⁵¹

Observation # 18: The public agency has to meet its mandate to help the group develop and choose a course of action in the face of:

- 1) the fact that choices between alternatives inherently require choices between conflicting values of actors and
- 2) the fact that one actor's values are not "right" and another actor's values "wrong" - or one actor's values "more right" than another's.

⁵¹Fried uses these words in his description of professionalism as a strategy attempted by the Rome planners in the 1950s. He makes an interesting hypothesis about the kinds of decision-making environments in city planning which are likely to yield to such a strategy (i.e. a la Rome) of professionalism.

Robert Fried, "Professionalism and Politics in Roman Planning"., J.A.I.P., XXXV, (May 1969), pp.150-159.

IV.D. Summary

We can imagine that each actor perceives a network of means-ends relations, a huge goal fabric which represents his particular view of "how things work"; it is his view of the universe. This conceptual network is, of course, very large; it appears realistic to imagine that an actor can, at any given moment, perceive only a part of his entire goal fabric within his cone of vision.

The uppermost parts of the goal fabric are teleological in nature; the nodes and links in this part model the actor's definition of ultimate purpose. He is the final authority on the efficacy of his teleological goal fabric while the correctness of nodes and links in the lower, mechanistic part of the goal fabric can be checked objectively. The lowest nodes in an actor's goal fabric represent alternative actions.

The individual actor's rational decision-making efforts are aimed at understanding a particular portion of his goal fabric. He wants to be aware of all feasible alternative courses of action that are open to him, what the various consequences of each alternative course of action are, and how these consequences, in turn, affect his highest and most valued purposes. To be rational, for him, means to choose a course of action (at the bottom of his goal fabric) which has a desirable aggregate impact on his values (at the top of his goal fabric). When actors establish different preference orderings over a set of alternative courses of action, there may be any of a number of reasons behind it. If those reasons lie in actors' different mechanistic goal fabrics, the public agency may be able to resolve the differences in preference orderings by providing information which allows actors to construct better, more perfect mechanistic goal-fabrics

with - hopefully - fewer or no discrepancies between them. If, however, the reasons for the differences in actors' preference orderings over alternative courses of action stem from disparities in their teleological goal fabrics, the public agency cannot expect to get agreement on a choice unless some actors change their values or the set of alternatives itself is changed.

PART B:
AUGMENTATION AND META-PROCESS,
A STRATEGY FOR
RESPONSIVE AND RESPONSIBLE
DECISION-MAKING BY A PUBLIC AGENCY

CHAPTER V: AUGMENTATION AND META-PROCESS, A
TWO-PART STRATEGY

CHAPTER VI: COMBINING THE TWO-PART STRATEGY
INTO ONE DYNAMIC PROCESS

In these two chapters we propose a decision-making approach which the public agency - in the context of the problem that we have defined - can use to help a community of diverse interests find and choose a course of action in a manner that is consistent with the four decision-process criteria put forth in Chapter II.

CHAPTER V

AUGMENTATION AND META-PROCESS, A TWO-PART STRATEGY

- V A. The Setting
- V B. The Strategy
 - VB1. Augmentation
 - VB2. Meta-Process
- V C. Summary

ABSTRACT

Augmentation, the first part of the two-part strategy, is the systematic selection and enhancement of particular features of one alternative being ranked by the group, so that each member of the group ranks the resulting augmented alternative as his first choice. It has the public agency concentrate on possible ways of finding agreement among the other actors by finding agreement in the lower, mechanistic parts of their respective goal-fabrics.

When each actor looks at a given alternative and ranks it within his set of perceived alternatives, each one looks for and evaluates those features of the alternatives which have meaning in terms of the values that are embodied in the teleological part of his goal-fabric. The public agency makes a survey of all alternatives and chooses a base alternative for augmentation. It then augments this alternative by enhancing those features of the alternative which have the potential of changing some actors' preference orderings in such a way to make for an unanimous first choice.

If augmentation - which is a process of choosing an alternative - fails to produce an unanimous choice, the public agency has to help the group select a different process for choosing an alternative; the agency has to engage in a meta-process.

Meta-process, the second part of the two-part strategy, is the process of selecting a process for choosing a course of action, for redefining the problem, or for changing some of the constraints. It has the public agency search among actors' cultural values for agreement to support a shared definition of the collective problem and the selection of a fair choice process.

The public agency has to build the meta process around the group's cultural values and stay within the limits of decision-process criteria. As part of this, the agency has to make sure the group considers the process to be fair. It first has to find out whether the group feels that the appropriate problem is being addressed by the whole decision-making process and whether it considers the agency's role to be legitimate and proper. The agency has to examine the group's relevant norms and concepts of limits for public actions, its concept of individual interests' rights, and of due process. The typical meta-process deals with the kinds of compromises the group is willing to make in its definition of the problem or the application of decision-process criteria. Like augmentation, it may or may not produce a choice. If it fails, the establishment actor has to resort to a meta-meta-process.

V.A: The Setting

Say a community of actors, needs to make a decision on what collective course of action they will take to solve a communal problem. Each of the actors in the group represents an interest with its own set of values, and each actor has his own perception of the problem, of the range of feasible solutions, and of the relative desirabilities of all the alternative courses of action; - that is, each has his own goal fabric and his own preference ordering over the alternatives he perceives. Say, because the group members do not agree on what alternative is the best course of action, they hire some professional(s), i.e. a public¹ agent or agency, to help them develop and choose a course of action. Assume further that:

- 1) The group is not an entirely arbitrary assortment of actors. Many of its members have other occasions to work together, the group members thus share a body of cultural values.²
- 2) Within the limits of these cultural values, the members consider the individual interests' different - even conflicting - value systems to be sovereign.³
- 3) The public agency has no mandate⁴ other than to help the group; it has no bidders agenda.⁴

This is, in a few broad strokes, a sketch of the setting of the problem.

¹ "Public" refers to the group, to differentiate this agent or actor from the actor or agent representing an individual interest.

² Observation #8; see Section C. Chapter II

³ Assertion #9; see Section A1, Chapter IV.

⁴ Assertion #1; see Section B3, Chapter I.

We will now put ourselves into the position of that public agency, and we will try to determine how to proceed, in this setting, with "helping the group to develop and choose a course of action". Much of the previous chapters has been devoted to helping us decide what all the public agency cannot do. Let us now see what it can do to get a collective choice.⁵

V.B: The strategy

The main thrust of the proposed strategy aims to satisfy the decision-process criteria making use of the actors' values: It uses the group's cultural values to shape the decision-making process, and it uses the different and disparate value systems and views of the universe of the individual interests who make up the group to shape the features of the course of action which will be implemented.⁶

⁵ The proposed method is designed to work in the United States during the 1970s' it has no application in situations where the relevant group of actors subscribes to a doctrine which is sufficiently powerful to generate a goal fabric defining the "right" version of "the good life" in operational terms. The legitimate existence of such a doctrine simplifies, to say the least, the making of public policy greatly; it amounts to saying: "there is one right way and many wrong ways of doing everything, and we have a manifesto which tells us which is the right way".

⁶ This approach obviously gnaws directly from the four basic decision process criteria developed in Chapter II: 1) Understandability and believability, 2) Identification of applied values, 3) Role of the group's cultural values, and 4) Adaptability.

The proposed strategy is based on a complete rejection of the notion that one particular version of the goal fabric can, in a doctrinaire fashion, be established as the "right" one: in fact the notion that there is one "right" decision-making process is also rejected...

Augmentation is that part of the strategy which is designed to let the various actors' different and disparate goal fabrics shape the alternative; meta-process is that part of the strategy which is designed to let the group's cultural values shape the problems and the decision-making process for solving the problem.

Definition: Augmentation

Augmentation is the process of enhancing an already conceived alternative course of action by adding features to it in direct response to individual actors' goal fabrics.

Definition: Meta-process

Meta-process is the process of designing, changing, and/or selecting a group decision-making process, redefining the problem or changing any of the assumed constraints.

V.B.1: Augmentation

Typically,⁷ each actor evaluates an alternative by examining just those of its features which affect him. Thus each of several actors evaluating a particular alternative perceives - and therefore evaluates - a different set of features. To say that an actor prefers

⁷ Exceptions were discussed in Section C2 of Chapter IV, e.g. a zero-sum game perception and hate.

one alternative over another is to say that he prefers the set of perceived relevant features of one alternative over the set of perceived relevant features of another alternative.

An approach suggests itself here: let us look at an alternative from the point of view of each actor, in turn, and let us add or take away specific features of the alternative which make the alternative more desirable in that actor's eyes and which have either no negative effect, or a minimum negative effect, on its desirability from the points of view of other actors. After we have done this from each actor's point of view, the resulting augmented alternative has such attributes that, ideally, each actor sees in it a set of features which he prefers over the sets of features he sees in any of the other alternatives.⁸

This process of augmentation consists, essentially, of two steps. First we must pick an already developed alternative to serve as the base for augmentation, and then we have to do the actual augmenting by finding specific features which can be added to the alternative - or, in some cases, that can be removed from the alternative.

Selection of the base alternative

Recall that we are in a setting⁹ where each actor - with the exception of the public agency - already has his own preference

⁸ The augmented alternative we seek is thus for all intents and purposes, Pareto optimal to the entire set of un-augmented alternatives.

⁹ See the section above on "The setting".

ordering over the set of alternatives he perceives.¹⁰ From our, i.e., the public agency's, point of view the union of all the actors' sets of perceived alternatives - including any possible alternatives perceived only by us - constitutes the body of alternatives from which we need to identify the best candidates for augmentation. We need to make a survey of all these perceived alternatives - none of which is the universally preferred choice - and identify one which, we believe, can be augmented to become the universally preferred course of action. We can make this survey by asking three questions about each alternative:

- 1) How difficult would it be to find the necessary augmentations to make this alternative - in the augmented form - the group's unanimous choice?
- 2) How confident are we that this judgement is correct?
- 3) What costs, to the whole decision-making effort, would be connected with an unsuccessful attempt to augment this alternative?

The questions require us to apply our knowledge of the issues and actors in the particular situation and our professional experience so that we can come up with an assessment of an alternative's relative potential as a base for an augmented alternative.¹¹

¹⁰ Note that the public agency may perceive alternatives but that it can't have a preference ordering of its own which is independent of other actors' preferences.

¹¹ Different professionals are bound to make different assessments. We may be able to address this problem by having the assessing carried out by a team of them and thus achieve a leveling of the differences. If this is not feasible, we must make sure that the assessments are comparable; that the same assumptions are made about the future, that the same amount of conservatism, etc. is used throughout. One obvious rule should be that anyone who gets involved in generating an assessment ought to generate assessments for all alternatives in the set.

The whole process of surveying all the alternatives should be a rather quick pass through the alternatives, and there need not be a specific procedure for making the actual assessments. In one case, for example, question #3 may be judged to be much more important than in some other case. However we do the comparing, it is clear that if we make the assessments in a conscious, explicit way, we are in a better position to pick the alternative with the best potential than if we leave the issues which enter into the judgment entirely implicit.

Should we conclude that there is no feasible set of augmentations which can bring about the unanimous selection of any of the alternatives, we look at the options that are left to us and proceed to the meta-process part of our aggregation strategy.

Creating the augmented alternative

Assume we have made a pass through all alternatives in the set and have decided that, indeed, there is at least one alternative which warrants the effort of trying to augment it so that it will become the unanimous choice of all actors. We now must, for each actor in turn, find the specific answer to the question: what kind of augmentations need we make to have this actor put it at the head of his preference ordering?

There are essentially two approaches for discovering potential augmentations. Either 1) we, i.e. the public agency, come up with the augmentation, or 2) the actor in question helps us in this by generating the augmentations himself.

The first approach requires that we understand the actor's values and his particular view of the universe, that we know what his goal fabric looks like. Since a good part of his goal fabric consists of teleological links between subjective nodes, we can expect tremendous difficulties with this approach for several reasons. It is questionable how good we are at perceiving a problem through someone else's eyes, but, what may be even more important, beyond that there is the question whether we are really able to play-vicariously-another actor's role without interjecting norms and values not because we think he has them but because we think he should have them.¹² If there is no way we can get a direct input from the actor in question, we have, of course, little choice but to try our own hand at playing his role.

The second approach recommends itself because it does not require the actor to articulate, nor us to interpret, his values in the abstract; it permits him - and us- to get right to specific design features that he perceives to be inferior to relevant features of other, for him superior, alternatives. In Chapters VIII and IX we will look at pragmatic techniques of community interaction for finding and using actor input to create augmentations.

For a conceptual model of the augmented alternative, recall that each actor evaluates the alternative along dimensions which correspond to his particular goals. It is because he judges

¹² Note that the public agency may perceive alternatives but that it can't have a preference ordering of its own which is independent of other actor's preferences.

the un-augmented alternative to perform lower along one or more of these dimensions than another, by him preferred, alternative that we intend to augment the former. We can look for ways of augmenting the alternative either:

- 1) by improving the performance of the alternative directly by adding some feature which affects the actor's evaluation of the alternative along the dimension in question, or
- 2) by improving the performance of the alternative indirectly by adding some feature which affects the actor's evaluation of the alternative along some dimension other than the one in question.

To illustrate, let us look at a very simple example. Imagine the following case;

- The actor we are currently looking at has ranked the alternatives that he perceives to be in the set thus:

$$\text{ALT 2} > \text{ALT 1} > \text{ALT 0} > \text{ALT 3}$$

- Because our survey of all alternatives has led us to judge that ALT 1 is the best potential base for developing the universally preferred alternative, we would like to augment ALT 1 to change this actor's preference ordering thus:

$$\text{ALT 1} > (\text{ALT 2}, \text{ALT 3}, \text{ALT 0})^{13}$$

- Our actor evaluates, the performance of the alternatives along just two dimensions.

Since we have to improve ALT 1 so that our actor will prefer it to ALT 2, we will examine what it is that he likes about ALT 2 and what he dislikes about ALT 1. Say we discover that his relative evaluation of ALT 1 and ALT 2 along the two dimensions is thus:

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We don't really care how the lesser alternatives (ALT 2, ALT 3, and ALT 0) are ranked provided the augmented alternative is preferred over all of them. ALT 1 no longer is in the list because ALT 1 is superior to it by definition.

	ALT 1	ALT 2
DIM1	NOT SO GOOD	GOOD
DIM2	OK	OK

Since our actor appears to be indifferent about the two alternatives when evaluated along DIM2, he obviously is ranking ALT 2 over ALT 1 because of their relative performance along dimension DIM1.

Augmentation using the direct approach addresses this dimension; it should result in the following evaluation by our actor:

	ALT 1'	ALT 2
DIM1	VERY GOOD	GOOD
DIM2	OK	OK

Augmentation using the indirect approach which might - but will not necessarily- result in his ranking ALT 1' over ALT 2, aims to result in this evaluation:

	ALT 1'	ALT 2
DIM1	NOT SO GOOD	GOOD
DIM2	GREAT	OK

The second, i.e. indirect, approach can be used if it appears feasible to make an augmentation along the dimension which is responsible for the pre-augmentation ranking that we are trying to reverse.

Whether we augment the alternative along the dimension which is at the road of the ranking or whether we make a side-payment by augmenting it along some other dimension, it is far better to let the actor in question produce - or at least help us produce - the augmentations than to do it completely on our own.

The recommended approach of letting the various actors make as direct an input as is feasible means the public agency cannot afford to be aloof; it needs to be receptive and open. Lay actors do not always present their ideas all worked-out and finished, rather gems of ideas may be buried under masses of arguments, ideas, and may have to be carefully gleaned from all the communication between the various actors. The professional also should design concrete, understandable examples of features which might be incorporated in an alternative; this allows the lay actor to get a realistic feel for the flexibility one can get with putting together different packages of features - all being essentially variations on the theme of the base alternative.

While representation of every affected interest by some actor in the decision-making process is part of the same ethos which has made us cast the public agency in the role of a public servant,¹⁴ there is a very compelling technical reason to insist that every interest be represented in the decision-making arena: since the proposed approach to augmentation relies heavily on actors making a direct input, the approach also assumes that all of the interests are represented. If the approach were used which has the public agency vicariously providing all the interests' values, a one-for-one correspondence between interests and actors would not be of the same critical importance. Consequently, we have to make sure that every affected interest is directly represented. As a last resort, if it is impossible to find an actor to advocate for an interest, we have

¹⁴ Assertion #7, Section C4, Chapter II.

to take on the role ourselves. In such a case we have to assign personnel who will, as one of their responsibilities, be the outspoken, explicit advocates of the otherwise unrepresented interests in the augmentation process.

Some taboos in augmentation

The public agency operates under different rules and constraints than do the various lay actors. Because we do not represent an individual interest with its own objective value system,¹⁵ we cannot pursue any subjective goals of our own. As is pointed out in the earlier chapters, we operate under rigid constraints which apply only to us, not to any of the other actors.¹⁶

Augmentation aims to change the preference orderings of those actors who do not rank the to-be-augmented alternative as their first choice, and we have shown how we might go about doing that by enhancing the alternative in question. We could, of course, do the converse; we could change the actor's preference ordering by making the other alternatives less attractive. This is a perfectly legitimate tactic used in games of strategy and may therefore be pursued by any of the actors representing special interests.¹⁷ Needless to say, if we as a public agency employed the tactic, we would be behaving like a special interest which, in turn, would pull the rug out from

¹⁵ With the exception mentioned just above, where the agency is an otherwise unrepresented interest's advocate.

¹⁶ Assertion #1 in Section B3 of Chapter II and the four decision process criteria in Chapter II.

¹⁷ Deceiving some of his fellow actors is not ruled out as a course of action for an individual interest by Observation #1; see Section B, Chapter I.

under us as servants to the general public. Making negative augmentations, therefore, has to be labelled an unqualified taboo.

Still another tactic may suggest itself by the realization that actually what we are after is a change in the actor's perception of the alternatives. Augmentation attempts this by augmenting the alternative with features which are particularly relevant to the actor in question; we might, of course, achieve a change in his perception by leaving the alternative itself alone and working to change only the actor's perception. Assuming that there is nothing wrong with the mechanism by which he perceives¹⁸ the alternatives, this tactic amounts to deceiving the actor into mis-predicting the impacts of the alternative in question.

As with negative augmentation, a tactic of deception can only be used by special interests; it is strictly outside the public agency's legitimate tools of the trade.

¹⁸ On the other hand, if the actor does, in fact, have faulty perception mechanisms, we must address the problem of improving them. Don't forget, however, that if the actor perceives an alternative completely differently because he has values that we do not personally share or even understand, we are not talking about an instance of faulty perception. The definition of faulty perception has to be limited to making predictions about the impacts of the alternative before implementing which, after implementation, the actor himself would agree were wrong. Note that this definition is slightly broader than the definition of means-ends relationships in the mechanistic section of an actor's goal structure; it does allow for inclusion of experiential mind-changing in the teleological part of his goal structure.

Limitations of augmentation

The strategy of augmentations has some important limitations.

While we aim to accommodate the subjective values of individuals, there is one important kind of value which we cannot accommodate at all. If one actor has a positive utility for seeing another actor suffer a disutility, i.e. if one hates the other; or in the somewhat more general case of two actors having - or perceiving to have - a zero-sum game relationship¹⁹, there obviously cannot ever be a unanimous first choice.

This is a very real limitation of the strategy and has some implications for the public agency. First, before we attempt augmentation, we must establish whether any actors perceive themselves to be in a zero-sum game relationship vis-a-vis any other actor. If we can find some such actor, we must establish whether the relationship is really a conflicting one or whether it is only perceived to be so. Should it turn out to be a matter of misperception on the part of one or more actors, we address the problem of effecting a more realistic perception. If the relationship indeed appears to be one of conflict we must explore ways of changing the relationship. And finally, if we fail in this, we must bypass - at least as far as the actors in conflict are concerned - the augmentation strategy and proceed directly to the meta-process.

¹⁹ See Section C2, Chapter IV: Zero-sum games and Hate

A designer may feel very constrained to just be making marginal changes to already developed alternatives; he might prefer to be free to design completely new alternatives. This, however, highlights the limitations of our goal rather than the limitations of the strategy. We set out to aggregate different individual preference orderings over developed alternatives. As a matter of fact, we are really stretching the definition of choice and aggregation precisely because we are opening the door to designing new alternatives.

V.B.2: Meta-Process

A unanimously agreed-upon choice, as might result from augmentation, is, by definition, not questioned. Chances are, however, that - though the strategy of augmentation aspires to it - agreement falls short of being unanimous. In that case the group's cultural values have to be brought into play to determine what kinds of compromises on the requirement of unanimity can be made and, if an entirely different choice process appears to be in order, how that process should be shaped.

The public agency here has to engage in a decision-making process about the decision-making process for choosing a course of action - i.e. it has to engage in a meta-process. The meta-process strategy covers a very wide spectrum of choosing or amending the process by which choices get made, of redefining the problem, or of changing some of the constraints.

One possibility of getting a choice is to get agreement on a choice process - and then calling the outcome of the process the "collective choice",²⁰ i.e. finding an inherently fair choice process. We include here, under the term "meta-process", not only this particular approach but any escalation of the decision-making process from the level of developing and choosing alternatives to the level of developing and choosing decision-making processes, re-defining the problem, or relaxing constraints. Relaxation of constraints can be seen as making compromises on any of the principles stated in earlier chapters in the form of observations and assertions.

If the approach of letting the lay actors help us find design features for augmenting alternatives is advisable, the approach to let them help us find features for making compromises and for designing new decision-making processes is imperative.

Switching to the meta-process

Giving up on trying to augment an alternative means that we have judged - on the basis of our experience and familiarity with the issues which stand in the way of getting complete agreement - that the expected result from a different decision-making process is higher than the expected result²¹ from a sustained attempt with augmentation.

²⁰ Rothenberg pointed this out - Rothenberg, Jerome, *The Measurement of Social Welfare* (Englewood Cliffs, N.J: Prentice-Hall, 1961)

²¹ "Expected result" is a concept akin to "expected utility" in the sense that it is the net sum of the products of a distribution of probabilities over uncertain events and the concomitant benefits and costs. Agreement on a choice, costs in terms of time lost and resources expended, and likelihood of getting agreement are some of the variables that make up the result.

Just as with the several assessments that need to be made to pick a candidate alternative as a base for augmentation, there is no need to follow a strictly quantitative procedure to make this judgement, but there are a few questions that we should pose ourselves and that we should answer explicitly:²²

- 1) How do the various actors view our (i.e. the public agency's) role in the decision-making process? Do any of them question our legitimacy - and if they do - precisely what do they question?
- 2) How do the various actors perceive the decision-making process we and they are engaged in? Do any of them question the process' fairness, justice, or equity? Do any of them feel the process lacks any other necessary characteristics - and if so - which ones?
- 3) What assumptions were made previously and have become the basis for the current decision-making? Has any new information become available - since these assumptions were accepted - which might shed additional light on them? Do all actors feel that all of the assumptions and other previous decisions are still valid? What would it mean to re-examine them?

If some of the answers to these questions are sufficiently disturbing, we will want to turn our attention away from the problem of getting agreement on a choice and we will turn our attention to the issue of determining what we should be doing - which is also a "course of action" of sorts.

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Note that we should try to come to terms with how the various lay actors see the issues - not how we see them. This is a conscious effort to prevent any bias on our part to creep in and to keep the alternatives and the process understandable and believable for the lay actor. Abraham Kaplan The Conduct of Inquiry, (San Francisco: Chandler Publishing Co, 1964) p. 376.

Searching for the right process

We may need to back up a little in the decision-making process - for example; we may need to restate the problem the group is addressing in the light of new knowledge - or we may need to get out of trying to solve the problem altogether. Meta-process activities are not entirely unlike other problem-solving processes: the goal is to obtain, within the constraints of the group's cultural values, a design of a decision-making process which is feasible and responsive to the group's sense of fairness, justice, equity and propriety, and which can achieve effective agreement among the group's members on a choice of an alternative. We can, in fact must, resort to the group's shared values to guide us in developing an acceptable choice process. A major part of the activities of heterogeneous groups have to do with working out compromises arising from actors' conflicting values.²³ To do this, groups either develop their own concepts of fairness, justice and equity, or they fall back on the operationalized definitions of the larger culture they are a part of.²⁴

Obviously, when we enter the meta-process we have some fairly specific reasons for doing so; the answers to the questions which made us switch in the first place also provides us some insights and direction.

²³ The public's sense of legitimacy and its participation in the meta-process is that which Norton Long, in his "Ecology of Games" described thus: "(It) indicates the existence of roles and norms of a larger, vaguer game with a relevant audience that has some sense of cricket". Long, Norton "The Local Community as an Ecology of Games", American Journal of Sociology, LXIV (1958), p. 254.

²⁴ See the discussion of cultural values in Section B2, Chapter I, and Section C, in Chapter II.

Our reasons for getting into the meta-process thus can also tell us what kind of meta-process activities we ought to engage in. In some instances it may well be enough to bolster or amend the current decision-making process to satisfy an additional, critical criteria. In other cases it may be necessary to design an entirely different decision-making process for the specific conditions of the problem at hand.

Planners, typically, are not used to think in terms of "designing" a decision-making process. A body of literature which is relevant to the subject is to be found in game theory.²⁵

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The designer of a choice process can make use of a growing literature which discusses the major concepts at almost any level that suits him best. For example, an insight-full book, written at a level which is not demanding mathematically, is: Buchanan, James M. and Tullock, Gordon, The Calculus of Consent (Ann Arbor: The University of Michigan Press, 1965).

Very provocative and readable are:

D. Huszar, George B., Practical Application of Democracy, (New York: Harper & Bost.,
 Russel, Bertrand, Human Society in Ethics and Politics, (New York: Simon & Schuster, 1955)

In-depth explorations of important choice-concepts have to be read in the Game Theory literature, which makes more demands on the reader than the type of publications mentioned above:

Shubik, Martin, editor, Game Theory and Related Approaches to Social Behavior, (New York: John Wiley & Sons, 1964)
 Von Neumann, John and Morgenstern, Oskar, Theory of Games and Economic Behavior, (New York: John Wiley & Sons, 1967)
 Boulding, Kenneth Ec., Conflict and Defense, A General Theory (New York: Harper and Row, 1962).

Games, and rules of games, embody the abstractions of the influence relationships which get built into decision-making processes.

We cannot expect to find the fully-designed processes in the game theory literature; rather, the literature puts us in the right frame of mind to translate the group's cultural values into decision rules and processes. The most important requisites that have to be built into the decision-making processes, however, are the group's operational concepts.

In a given group, the concept of fairness embodies quite specific requisites, such as compassion for people, respect for property, due process, equal protection, etc. We have to identify the criteria that are relevant in a particular context and we have to understand their meaning in that context sufficiently to incorporate them in the choice process we are designing. Some of the questions we might pose are:

- what relevant rights does an individual interest have?
- what are the limits on his sovereignty over his values?²⁶
- what responsibilities does the individual interest have toward other interests? - toward the group?
- what are the rights of small minorities in the group?
- what are the variables affecting an interest's legitimacy?- an interest's standing in the group?

²⁶ Morris and Rein, as well as others, point out that in a decision-making situation where complete, or nearly complete, agreement of all participants is required, the individual (dissenter) actually has a disproportionate amount of influence. The group needs to come to grips with the implications of such powers of individual interests. Robert Morris and Martin Rein, "Emerging Patterns in Community Planning" in Urban Planning and Social Policy (New York: Basic Books, 1968).

- what constitutes due process in a given context?
- what constitutes justice in a given situation?
- can any individual interest be expected to suffer through public action? - If so, under what condition - to what extent?
- what role does compassion for people play in the activities of the group's member actors?

Thus we may want to design the choice process, or we may pick an available one; in either case we must make sure that the process embodies the cultural conceptions of fairness, justice, equity and propriety. If the choice process is perceived to meet its standards they will - in effect- agree to live by whatever choice the process will make.

One of the things the process may obviously provide for is to put some constraints on selected, or the entire set of, alternatives. In our context, for example, cultural conceptions of equity may limit the alternatives by requiring that they all include direct compensation for any negative changes from the status quo.²⁷ Other constraints may be prescribed by the society's body of laws - such as our constitution. The responsibilities and authorities of the different actors, particularly of the public agency, should be spelled out in statutory and administrative regulations; they have to reflect the general public's sense of what these responsibilities and authorities ought to be. We can learn much about the public's operational concepts of fairness in decision-making processes and about constraints on alternatives - by studying the group members' current involvement, and past history

²⁷ We provided for this by making Observation #5 in Section A5 of Chapter II.

of involvement, in other issues.²⁸

Choosing the right process

The group, or the culture which the group is a part of, has methods for making meta-decisions.²⁹ Choosing a decision-making process is a meta-decision; it has far-reaching implications. It is not as if an alternative were being chosen; it is at least one order of magnitude higher because it will determine how all choices of alternatives will be made.

The higher up we get in the levels of decision-making, the more far-reaching the effects will be and, consequently, the more important it is to make sure that the choice is in complete harmony with the group's cultural values. The professional, to be of help

²⁸ From a study of Yutzy the unorthodox idea suggests itself that we might learn most about a community's cultural values if we observed-provided we get the opportunity - how it deals with a catastrophe. While Yutzy addressed himself to the community's establishment of priorities in its Civil Defense response to an emergency, the same concept can be applied to other, maybe less spectacular, emergencies.

Thus we might study,

- 1) A community's priorities, as it expresses them and pursues them in normal times, and
- 2) the change in these priorities after a major reduction has occurred in the resources available to work for the achievement of the above priorities.

Daniel Yutzy "Priorities in Community Response", American Behavioral Scientist (Jan-Feb, 1970).

²⁹ Observation #8; see Section C, Chapter II.

to the group at this level, should have an emphatic relationship with the lay actors.³⁰

Meta-meta-process

Unless the decision-making process we design recognizes the group's norms - which are rarely, if ever, articulated - the process will be unacceptable to its members. Should it really happen that we come to the conclusion that we cannot put together a decision-making process which is acceptable to the group, then we have to apply the concept of meta-process to the meta-process, i.e. meta-meta-process. We thus must design, or find, a process for choosing a decision-making process.

In fact, we can remove the decision to even higher levels if we continue to fail getting the necessary agreement in the group, i.e. to a meta-meta-meta-process, etc. This is not as un-realistic as may appear on the surface. We are witnessing a higher order meta-meta-process, whenever a society or a group questions concepts which

³⁰ If the notion that greater understanding of the context of a problem by the professional makes for a better chance that the professional can develop a good solution to the problem needs legitimation, we may quote Ackoff: "A (scientific) problem never exists in isolation; it is surrounded by other problems in space and time. The more of the context of a problem that a scientist can comprehend, the greater are his chances of finding a truly adequate solution." Russell L. Ackoff; Scientific Method: Optimizing Applied Research Decisions (New York: John Wiley & Sons, 1962), p. 429.

are very basic to its normal organized manner for resolving issues.³¹

While our entire endeavor consists of the development of a specific decision making strategy, we need not pretend to be operating in a vacuum, i.e. in a state of anarchy. We can assume that the actors in question are part of an organized society which does have some way of settling disputes.³² Thus, rather than insist that the choice process be chosen unanimously, let us assume that the methods which the society normally relies on for making decisions of this sort will be used for settling any dispute over the choice process. The only qualifications we should attach are:

- 1) A choice-process which prejudices the choice does not really qualify as a meta-process.
- 2) Any of the society's existing methods that we consider to apply have to meet the same decision-process criteria that the choice process itself does; i.e. it has to embody the society's concept of fairness, justice, equity and propriety.

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For example, say the first-order choice in question deals with the design of an urban renewal program. If the group fails to reach agreement on it, the meta-process will concern itself with whether to use a referendum, or some other choice process, for choosing the design. If they fail to reach agreement on that, using a meta-meta-process may mean appealing to the state legislature and/or the courts to settle the issue of whether a referendum is appropriate. It is possible that the group will not accept the meta-meta-process' product and will go to a meta-meta-meta-process by appealing to the Supreme Court to interpret the constitution as to whether the lower court and/or the legislature made the right meta-meta decision. This can be further escalated, through constitutional amendments, to designs for the conduct of constitutional conventions, etc.

32 This refers again to the discussion of cultural values.

V.C: Summary

When we find that the various interests cannot agree on a collective choice from among the alternative courses of action, we look for ways to augment an existing alternative. We search, with the help of the interests whose preference ordering we hope to change, for features which can be added to one of the alternatives and thereby raise the relative desirability of the (augmented) alternative to the point where it becomes the universally preferred choice. Because the features have to respond to the needs of the interests as they are perceived by their respective actors, the public agency should encourage the actors to make as direct an input as is feasible rather than try to rely on the vicarious role-playing by the public agency.

Should it prove infeasible to augment any of the alternatives successfully - that is, to the point where all affected interests can agree on a collective choice - then we have to escalate the decision-making process one level, to the meta-process. While at the augmentation level we called on the individual interests' diverse values and means-ends perceptions, at the meta-process level we call on their cultural values. We need to refer to these shared values to find out what changes in the decision-making process, the definition of the problem, or constraints on the process and on the range of alternatives would be consistent with the group's sense of fairness, justice, equity, and propriety. Within the parameters of the group's cultural values we then must find or develop a "decision-making course of action" which is either inherently fair or which makes it possible to de-escalate back down to an altered augmentation level where an action alternative can be chosen.

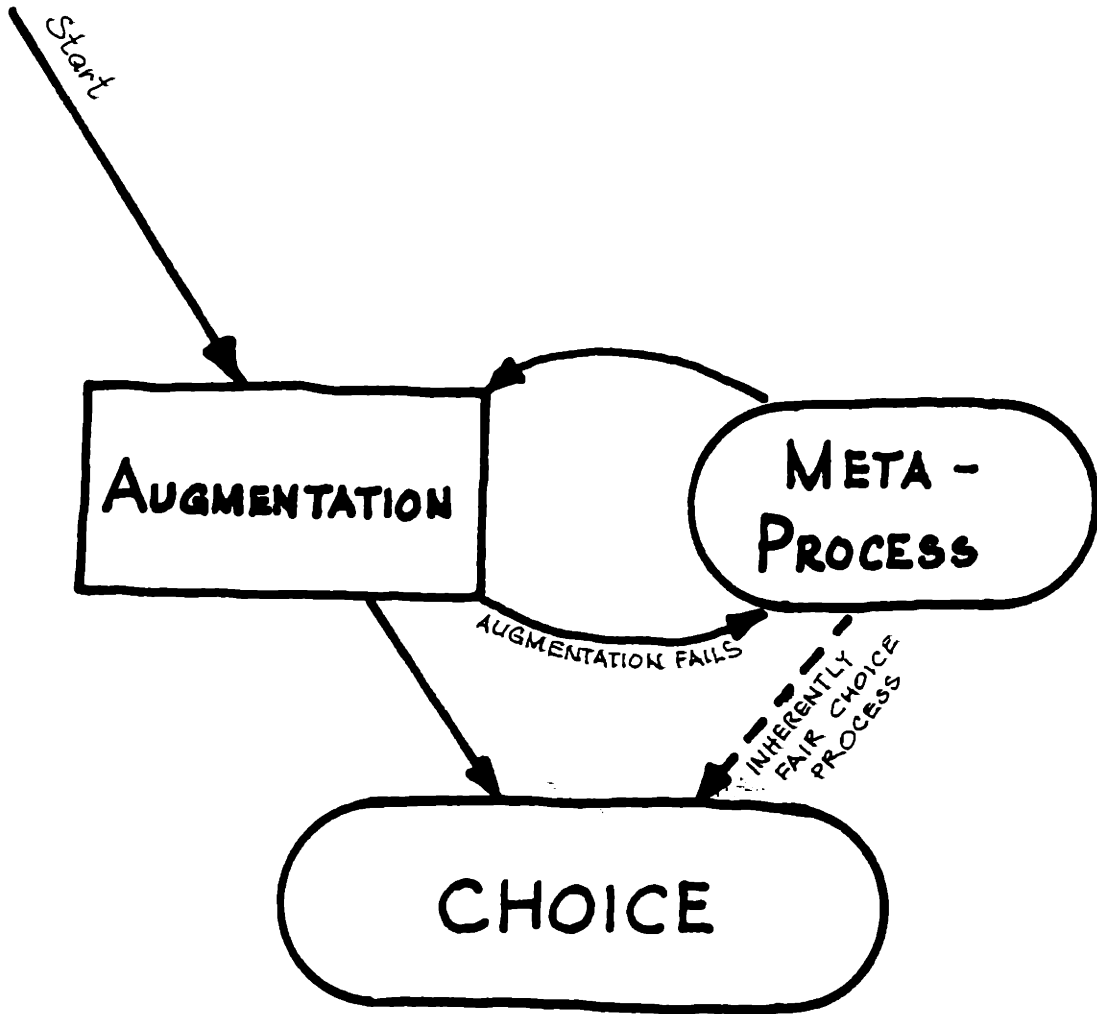


FIGURE V-1: The Two-Part Strategy

CHAPTER VI

COMBINING THE TWO-PART STRATEGY INTO ONE DYNAMIC PROCESS

- VI.A. Meta-Process is Necessary but not Sufficient
- VI.B. Compromising Unanimity in the Augmentation Process
- VI.C. The Dynamic Process
- VI.D. Summary

ABSTRACT

Augmentation and meta-process are not really two alternative processes which a public agency can use; rather, the two processes are complementary.

The meta-process is a necessary part of any public agency's decision-making process, but it - by itself - is not sufficient to guarantee that the group actually can make a collective choice. Augmentation can, provided its legitimacy is first established by a meta-process, help the public agency find and enhance an alternative's key features. Augmentation, as described in Chapter V, is an ideal; some of its principles may have to be compromised in practice. But, compromising any of the decision-process criteria or other constraints may mean that the resulting process violates some of the group's cultural values. Before the compromises are made, the public agency has to make sure, via meta-process activities, that any contemplated compromises do not violate the group's shared concept of fairness, justice, equity, and propriety.

Combining augmentation and meta-process thus means weaving the two together into one single process rather than using them as a one-two sequence. This resulting process is dynamic; it always has the public agency looking ahead to make sure that the activities it is about to engage in are appropriate in light of the group's current cultural values and actually have the potential of contributing to the making of a collective choice - and looking back to make sure the previous assumptions and decisions are still valid.

If the agency judges that the currently contemplated activities do not meet this test, the agency backs up by raising the decision-making to the next higher level. There it works on finding or designing a more promising decision-making process, redefining the problem, or changing some of the perceived constraints first. Once the agency determines that augmentation - or any other process it develops - is appropriate, it de-escalates the decision-making process again. It then uses a meta-process only to make sure that its activities continue to be appropriate as values, perceptions, and even some of the objective criteria continue to change over time.

We have discussed augmentation and meta-process as two processes which can be applied in a one-two sequence to achieve a collective choice:

- 1) use the augmentation strategy to try to find a universally preferred alternative,
- 2) if you fail to get a collective choice that way, escalate to the meta-process to find what changes in the choice process have the potential of effecting a collective choice.

The meta-process thus appears to be, essentially, an alternative process in case the augmentation process fails to produce a choice. While this is an instructive way to model the concept of a meta-process, it is somewhat misleading because the two processes are not really alternative processes but complementary parts of one strategy.

The two parts of the strategy are very different from each other: augmentation deals with decisions about the specifics of an alternative and the various actors' perceptions of these specific features; meta-process deals with decisions about the purpose of the entire undertaking - i.e. definitions of the problem, decisions about the decision-making process, and decisions about constraints for the range of options. The two levels of decision-making are better thought of as complementary than as alternative processes; they need to be combined into one single, multi-level process.

VI.A. Meta-Process is Necessary but not Sufficient

Since augmentation is a choice process, and meta-process deals - among other things - with the selection of a choice process, there is

no reason not to subject augmentation itself to the meta-process. In fact, any decision-making process - including the one-two approach of 1) augmentation and 2) meta-process - needs to be subjected to the meta-process if we are going to be true to the principle that we will engage only in a choice process which has been validated by meta-process. This means that we have to get the relevant group's agreement that proceeding with the proposed strategy does not prejudice the possible outcome. To get general agreement on this point means that the members of the group feel one of two things: 1) - before it engages in the process - that the process, if properly executed, will be as fair to them as any process could be, or 2) - a priori of knowing the choice - that the solution which drops out at the end of the choice process will be fair, equitable, and desirable. If at least part of the group feels that this approach is unfair because it prejudices the outcome in one way or another by ruling out some possible choices, or by disturbing the probabilities of getting various outcomes, we have the reverse of what the meta-process aims for; we have an instance where the outcome is defined as unfair a priori of the outcome being known.¹

¹Meta-process being a higher level of decision-making, i.e. a meta-choice-process, means that there are more dangers involved in making decisions with it than with the choice process itself. First, if some actors are much better aware of the ramifications of meta-decisions than others, they might use this to their own advantage by deceiving the less sophisticated actors to agree to a meta-decision which actually is not in their best interest. Such a victory would, however, be of limited advantage. Realizing that they had been deceived, the less sophisticated actors would not necessarily feel bound to live by the agreement; they could revolt. In fact, they probably would not agree to another meta-decision at, presumably, great social costs to all. This kind of a revolt, actually, would be an instance of a meta-meta-process. The cheated actors would insist on operating at the meta-meta-level until they could establish sufficient constraints and guarantees to prevent a recurrence of the deceit they suffered.

To apply the meta-process to our efforts of finding a collectively preferred alternative means that we have to make sure that the community feels that 1) we are operating within the limits of our responsibilities and authorities, 2) the current and imminent decision-making process is fair, just, and equitable, and 3) the various assumptions and earlier decisions that are - implicitly or explicitly - at the root of the decision-making process are still valid. It amounts to checking the legitimacy of our role, the legitimacy of the whole process, and the current validity of the working assumptions. We must satisfy ourselves a) that the community has a good understanding of our role, the whole process, and the working assumptions and b) that, as they perceive these three phenomena, they consider them to be consistent with their cultural values. Only then can we proceed to the augmentation process. In fact, if we are very thorough with involving all the actors in determining the legitimacy of the process, i.e. the augmentation and meta-process, a general agreement should result among all the actors to the effect that the alternative chosen in the proposed manner - i.e. by having us search for augmentations, and that failing, searching for a meta-process - will be acceptable. Having this kind of agreement is a necessary condition to have the choice of an alternative, once it is made, stick; it is not, however, a sufficient condition to assure ultimate success in making a collective choice.

VI.B. Compromising Unanimity in the Augmentation Process

Augmentation, as presented in the last chapter, is a method for searching for a course of action. The solution, i.e. the augmented alternative we strive to put together, is an ideal.

Chances are we cannot always - if ever - achieve the ideal, and we need to deal with the question of how to proceed if augmentation indeed fails to produce a universally preferred alternative. For example,

what if, after augmentation has been exhaustively pursued, we have all actors but one prefer the augmented alternative?

Say that all actors but one have: $ALT2' > (ALT1, ALT3, ALTO)$

And one actor has: $ALT3 > (ALT2', ALT1, ALTO)$

The first thing that comes to one's mind is to ask:

What is the difference between $ALT3$ and $ALT2'$ for the actor in question?

What would it mean if $ALT2'$ were chosen over his protest?

What it would mean, of course, is that we would be compromising decision-process criterion #2, - particularly Assertion #4 which declares each interest's individual values sovereign within the limits of the group's cultural values. If the group now decides that a particular choice should be imposed on him, it really means that the group is extending its cultural values and thereby limiting the particular actor's range of (previously) sovereign values.

We have to expect that this kind of a situation will confront us frequently; and when it does, we need a more flexible approach than the pure augmentation process allows for. However, the fact that we might not be able to quite achieve the ideal, in no way suggests that we should have set our sights on something short of the ideal.

Imposing a choice on an actor means we violate the sovereignty of his values. To determine whether such a violation is within or beyond the limits of the community's cultural values cannot be settled completely within the public agency; we need to resort to the meta-process. That is, we have to outline what the compromise would mean:

- 1) What are the likely ramifications of making the contemplated

compromise?

- 2) How hard have we tried to find augmentations under the existing decision-process criteria?
- 3) Is a method for deciding on a compromise readily at hand or will it prove a major task to get agreement at the meta-level?

We need to secure an effective² agreement on which of the compromises is consistent with the cultural values, and we can then return to the compromised augmentation process. Thus, while the pure approach of augmentation does not allow for any collective choice short of a universally preferred alternative, we can change that approach, if need be, provided the norms and standards of the group are not violated as a result.

Violating a rule is tantamount to employing a different choice process from what we committed ourselves to at the outset. Consequently, we ought to call on the meta-process to check the legitimacy of bending the rule in question, in the given context, just as we called on it to check the legitimacy of applying the rule in the first place. Anytime we think of compromising some of our principles, rules, or process criteria or we think of changing the decision-making process in some other way, we need to call on the meta-process to determine how the actors,

²Effective agreement refers to an agreement which will stick. This simple definition is adequate for dealing with a meta-decision because we can assume that the group has ways of making meta-decisions; this is how a common purpose was decided on in the first place, and this is how we, the public agency, were hired. If this should not turn out to be the case, the community must first make the meta-meta-decision of how to make the decision about making a compromise in the choice process.

with their own value systems and their own ethic, perceive the contemplated compromise.

VI.C. The Dynamic Process

We can now combine the two-part strategy into one single process with two modes in which we fade into and out of meta-process and augmentation as the dynamics of events demand.

The decision-making process starts in the meta-process mode. From the moment we begin to address the problem of finding a collective choice for the community, we engage in meta-process activities, and we sustain them at varying levels of intensity throughout the process. Augmentation is brought in from time to time, but we never quite take our eyes completely off the meta-process. The level of intensity of the meta-process mode at any given moment has to correspond to the amount changes are being made on the choice process at that time. The level of intensity of the augmentation mode depends on the expected result³ of efforts to enhance one of the alternatives by searching and negotiating for additional features.

At the outset the decision-making activities address meta-issues, such as:

- Should the problem in question be dealt with at this time?
- Are we the right agency to address the problem, and do we have the right mandate?

³i.e. the currently estimated probability of contributing to the ultimate achievement of a collective choice.

- Are the assumptions - explicit as well as implicit - valid; can we and all the lay actors live with them?
- Where do we start; which of the preceding decisions can we accept as they stand, and which ones need we rethink?

Provided the answers to these questions are such that it appears we are, in the opinions of the actors who make up the community, on the right track, we turn our attention to the choice process we intend to use from that point forward. To this end we determine whether augmentation ought to be the next activity or whether we first need to make some changes to the augmentation-mode. We then are ready to shift from the meta-process-mode to the augmentation-mode.

If it appears that some of the meta-issues need to be dealt with, the decision-making must remain in the meta-process mode. We cannot get into the substantive issues of solving the presumed problem until the meta-issues are effectively agreed on by the group. If it is not possible to get complete agreement, we have to validate any compromise on it - much like in the case of compromises in augmentation - by examining just what the group's norms are for an agreement to be adequate. Once the initial meta-issues are settled, all actors know what problem we are addressing and within what constraints we are operating.

Though we are examining the whole decision-making process from the point of view of the public agency, we nevertheless must assume that each of the lay actors is doing his best to come up with solutions of his own. When we now also begin to generate alternative solutions, it is not so much because only we can generate them, as it is because we

need to make sure that all of the potentially feasible solutions get considered; we try to build the most comprehensive set of alternatives by including all alternatives we are aware of, and we also try to get all actors to perceive - and therefore rank - all alternatives in this inclusive set, no matter who generated them.⁴

We will rank not only the alternative solutions we have come up with but any other solution that we are aware of.

We have to make two kinds of judgments to determine whether we can shift into the augmentation mode; both judgments are part of the meta-process. First, we must decide whether we have enough of the potential alternatives developed. Second, to make the augmentation strategy - which relies heavily on each actor's own evaluation of the alternatives - meaningful, we have to judge whether the other actors understand all of the alternatives and their potential consequences. Only after we have satisfied ourselves that both of these conditions are met, can we begin the augmentation process as it was discussed in Chapter V. The augmentation activities require us to have a thorough, even empathic understanding of all affected actors' perceptions of the alternatives so that we can identify which has the best potential to be made - via augmentation - into the collective first choice. The actual features with which we enhance an alternative, ideally, do originate with the

⁴As was pointed out in the early chapters, we are not dealing in this discussion with the process per se of generating alternatives. We are only touching on it because the discussion of making a collective choice cannot - especially in a dynamic choice process - be dealt with as a completely separate issue. To settle any questions that may come to the reader's mind concerning our assumptions about the individual actor's process for solving problems, he should refer to Section B,

lay actors. We should try to stay out of the business of interpreting the lay actors' values and provide them with as much opportunity as is feasible to make actual concrete choices between features of alternatives that have meaning for him.

Even when we are deeply immersed in augmenting an alternative, we cannot afford ever to get completely out of the meta-process mode. Because everything can change over time, we cannot assume that the agreement on the meta-issues that existed before we began augmentation will necessarily remain. Thus we need to keep looking back over one shoulder to see if anything is unsettling the initial agreement. It may become necessary at any point to pull back from augmentation activities and reestablish agreement on the meta-issues. It would be self-defeating to continue with the execution of a choice process which assumes the existence of some kinds of understanding among the actors when, in fact, that understanding has dissolved.

The need to keep checking for the maintenance of the necessary agreements on meta-issues while working on augmentation, and, when it becomes necessary, the quick shifting from the augmentation mode to the meta-process mode, serve to demonstrate how the two essentially different processes of augmentation and meta-process must be intertwined.

We should develop a finely tuned process which shifts automatically to the next higher decision-mode when any of the assumption at the current level of decision-making appear to have lost their validity or if the expected results of the current activities fall sufficiently low.

The shifting up and down the decision hierarchy should be automatic and smooth. "Automatic" means that our on-going evaluation of the meta-issues should allow us to make the process management and the mode-changing a cybernetic system. "Smooth" means that we should be sufficiently sensitive in our on-going evaluation of the meta-issues to make a shift before any actors feel compelled to force us to make a shift; we should detect meta-issue problems before they develop into big controversies.

VI.D. Summary

Intertwining the two parts of the strategy into one single, dynamic process with two modes of operation gives us a much more versatile strategy. It can be used to get out of a stalemate because it allows us to use the strategy itself to alter and/or redesign the decision-process itself. Augmentation is designed to make the process satisfy Decision-process criterion #2 and meta-process is designed to make the process satisfy Decision-process criterion #3, but it is the intertwining of these two parts of the strategy which makes the resulting dynamic process satisfy Decision-process criteria #1 and #3.

Augmentation allows the potentially affected interests to help shape the course of action in direct response to their (sovereign) individual values. It is aimed at avoiding the making of interpersonal comparisons of utilities by building direct compensation features, which are acceptable to the actor in question, into the augmented alternative.

Meta-process brings the group's cultural values to bear if it appears we either are not addressing the right problem, or we are ad-

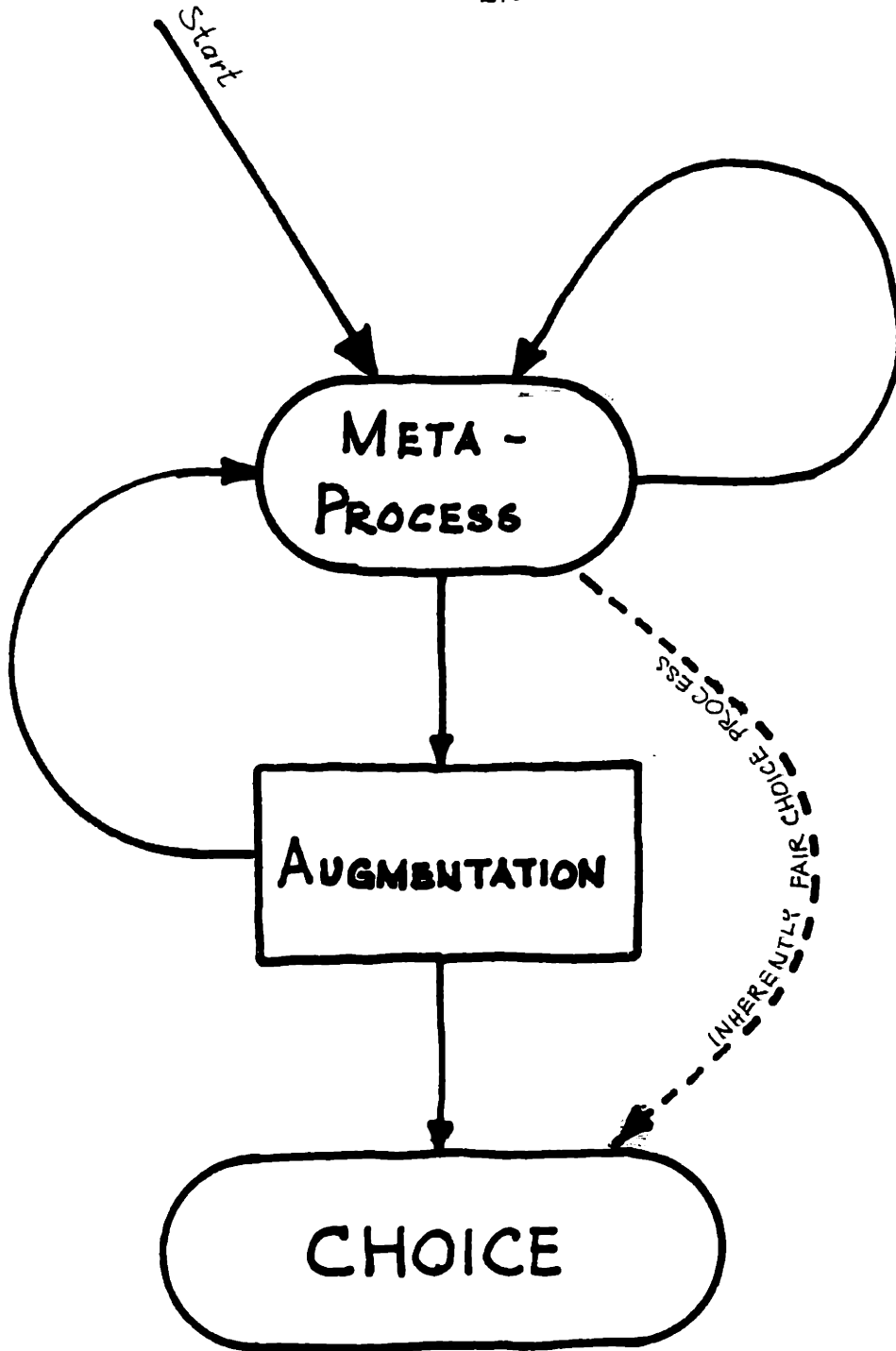


FIGURE VI-1: The Dynamic Process

finding the right one but are not likely to find an acceptable solution within the existing constraints. It is in response to the group's cultural values that we redefine the problem, design an altered decision-process, look for an entirely different process, or - as the case may be - work to change some of the constraints so that we can proceed with reasonable assurance of being able to produce a collective choice and with complete assurance that the decision-process and the alternatives thus developed do not violate the group's concepts of fairness, justice, and equity.

Requiring that the decision-process meet not only the public agency's assessment of process legitimacy but actually allowing the lay actors to police the process, means that the continuation of the process is also subject to their perception and understanding of what the process is and how it works. Consequently, for the process to continue, it must meet Decision-process criterion #1. The resulting dynamic process which can back up, start over, contemplate itself and change itself - obviously meets Decision-process criterion #4.

PART C:

AN OPERATIONAL APPLICATION OF THE
STRATEGY OF AUGMENTATION AND META-PROCESS

- CHAPTER VII: FOUR HIGHWAY CASE STUDIES
- CHAPTER VIII: AN APPROACH TO COMMUNITY INTERACTION:
 A SET OF COMMUNITY INTERACTION
 OBJECTIVES
- CHAPTER IX: A PROGRAM FOR COMMUNITY INTERACTION

It is one thing to outline a strategy, such as the strategy of augmentation and meta-process, on a conceptual level, but it is quite another thing to translate it into a set of operational work tasks that a public agency actually can try to follow. We shall therefore try to apply it in a specific context in these next several chapters.

The most obvious place to apply it is in a comprehensive planning context, as it is practiced by a typical community planning agency, such as a city planning office, a regional planning agency, etc. On the other hand, to apply the strategy to a public agency with planning responsibilities which are less comprehensive, such as an agency responsible for planning water resource management, highways, mass transportation, public health services, or criminal justice systems - offers the possible advantages of bringing the differences between the public agency and the public better to light because these specialized planning agencies are generally viewed as being very susceptible to pressures from special interests.

When the author discussed trying to operationalize the strategy, he came time and time again up against the same argument: this strategy might possibly work for some public planning agencies with comprehensive responsibilities, but it has no meaning in a more limited planning agency, particularly for a highway planning agency.¹ That did it.

¹ The year was 1968, and the interstate system was nearing completion. As the missing links in the network were finally being proposed - most of them had been postponed because they were sure to be disruptive and therefore hard to build - every planner-type became aware of the "highway revolt", - the almost systematic local opposition to proposed highways, marked by convulsive highway controversies.

The author set out to demonstrate that the strategy makes sense in any situation where a public agency is developing plans for the benefit of a community of diverse interests - regardless of the range of its powers or the pressures from some particular interests.

He undertook four case studies of highway controversies to earn the necessary familiarity with the decision-making environment in highway location-design decision-making which would allow him to translate the proposed strategy into an operational version. At the same time he associated himself with a research effort, just then being initiated by Professor Marvin L. Manheim.² The research project in question was an effort aimed at changing the highway location-design process in such a way that community and environmental values would be better incorporated in decisions made than had been the case.

² The National Cooperative Highway Research Board (NCHRP) of the National Academy of Sciences funded a study, The Transportation of Community Values Project (project 8-8) which, in its first phase ('68-'69), addressed the problems of designing a research approach to better deal with the impacts of highways on environmental values. The basic conclusion of that study was that it was not really possible to develop a process for evaluating developed alternative highway alignments and designs in such a way that environmental and community values would be taken into account. Rather, it was suggested that it would be more fruitful to examine the whole process by which alternative highway locations and designs are developed because environmental and "community" values - as well as any other values - really are brought to bear throughout the decision-making process.

Manheim, Marvin L., et al, The Impacts of Highways Upon Environmental Values

The collaboration worked out to the author's satisfaction³; it eventually offered him the opportunity to develop an operational model for the augmentation and meta-process strategy and seeing it incorporated in a Procedural Guide⁴ for use by State highway agencies. A preliminary version of the approach was also presented at the 50th Annual Meeting of the Highway Research Board, in January 1971.⁵

In order not to overload this section, the case studies per se have been moved to the Appendix, and the most relevant findings from the four case studies are summarized in Chapter VII, Chapters VIII and IX offer the operationalized strategy of augmentation and meta-process as it is applied to the location-design process of highway decision-making.

³ The author can only hope that the satisfaction is mutual.

⁴ Manheim, Marvin L., et al Procedural Guide, Community Values in Highway Location and Design: (Cambridge Mass.: M.I.T. Urban Systems Laboratory Report No. 71-4, 1971), Chapter V of the Procedural Guide covers essentially the same material as Chapters VIII and IX in this study.

⁵ Bleiker, Hans; Suhrbier, John H., and Manheim, Marvin L., Community Interaction as an Integral Part of the Highway Decision-Making Process, presented at the 50th Annual Meeting of the Highway Research Board, Washington, D.C. January 1971.

CHAPTER VII

FOUR CASES OF HIGHWAY DECISION-MAKING

- VII.A The crisis of confidence
 - VII.A.1 Accountability of the highway agency
 - VII.A.2 Validity of basic assumptions
- VII.B The crisis of solutions
 - VII.B.1 Dearth of fresh concepts
 - VII.B.2 Disputes about facts
 - VII.B.3 Refusal to recognize non-highway problems
 - VII.B.4 Failure to recognize possible alternative solutions
 - VII.B.5 Exploring community values
- VII.C The crisis of effectiveness
 - VII.C.1 Agency credibility
 - VII.C.2 Two-way communication
 - VII.C.3 Polarization of actors
 - VII.C.4 Lack of consensus
- VII.D Summary

ABSTRACT

Four cases of highway controversies were studied to provide the necessary empirical knowledge to discuss the strategy of augmentation and meta-process in a specific decision-making context. Consequently, in Chapters VIII and IX the strategy is worked out for the highway location-design process.

From the point of view of this study, the four cases suggest three kinds of crises that exist in highway decision-making: a crisis of confidence, a crisis of solutions, and a crisis of effectiveness.

The crisis of confidence stems from the fact that the public no longer is convinced that the (public) highway agency is working on the public's behalf. The highway agency is frequently perceived as an actor working for one or several special interests. The legitimacy of the entire highway location-design process is completely undermined by instances of decision-making behavior on the highway agency's part which violate the community's shared sense of fairness. Clearly, a meta-process mode is lacking in the current highway decision-making process.

The crisis of solutions stems from the fact that the alternative solutions, i.e. courses of action, which are generated, and from which a choice is made, typically make little if any attempt to respond to the various affected interests' own values. The alternatives that are offered have little or no appeal for the values and means-ends perceptions of the lay actors. This demonstrates that the introduction of augmentation-mode in the highway decision-making process could make a real contribution towards producing alternatives which are - and are perceived, by all actors, to be - real solutions. The cases suggest that location teams can generate solutions that respond to the needs of the people affected by the highway; in fact, the cases suggest that, while the location team needs to get as much direct input from the public as is feasible, lay actors are not inherently more responsive.

The crisis of effectiveness is the result of the other two crises; the highway location-design process is performing poorly from the points of view of:

- the lay actors who are against highways,
- the lay actors who are for highways, and
- the professionals in the public highway agencies;

i.e. the process is ineffective from any point of view. This has to be attributed mostly to the crisis of confidence and to the crisis of solutions; if those two crises are met, the decision-making process will be more effective in responding to affected actors' needs.

The author studied four highway controversies and the decision-making by the highway agencies involved in them. The cases involved:

- The Century Freeway in Los Angeles, California;
- The extension of I-278 in Union County, New Jersey;
- The Inner Belt in Metropolitan Boston; and
- Brooklyn Linear City in Brooklyn, New York.

The author studied these cases with an eye on identifying what potential operational ramifications the strategy of augmentation and meta-process has for the highway alignment and design process. What this really meant for the case studies was to look out for any kind of decision-making phenomena but particularly for those elements which could help us translate the proposed strategy into more operational terms.

We shall give only a very short description of the four highway location-design projects here¹ and then proceed to examine the types of decision-making problems that were evident. The cases were chosen for their dis-similarities, which is not to say that they cover the whole spectrum of urban expressway decision-making contexts.

The Century Freeway is a highway which was being planned along a corridor passing through several municipalities and some unincorporated areas in the County of Los Angeles. These communities varied greatly in size, in predicted highway impacts, in degree of interest in the highway, and in capability to participate in the decision-making. Some of the communities along the corridor were black,

¹ The cases are described in more detail in Chapter XI-XIV.

and others were white. In fact, important alignment decisions through the black communities of Watts and Willowbrook were being made about the time of the 1965 disorders there. The case is not very typical of highway controversies because the California Division of Highways is not typical; the California Division of Highways demonstrated far more sophistication - as seen from the point of view of the augmentation and meta-process strategy - than did the three highway agencies involved in the other cases.

Extension of I-278 in New Jersey involved a series of controversies surrounding the development of an alignment for a highway through an area of Union County, studded with moderate to middle-class residential communities. Compared to the other three cases, housing densities in the highway corridor were relatively low. The highway was eventually defeated by the local communities, but the highway agency managed to salvage the federal funds at stake by causing a special piece of federal legislation to be enacted. Since the defeat of the highway, a feeling has been growing within the agency that the day will come when the communities in question will regret having stopped the highway. Because the agency in this case is the New Jersey Department of Transportation with relatively broad powers, it may well be a self-fulfilling prophesy.

The Inner Belt in Metropolitan Boston is the inner-most circumferential element in a partly-built highway network consisting of several such circumferential belts and a number of radials focusing on central Boston like spokes in a wheel point to its hub. One segment of the belt in question, linking two of the radials, had been built

during the 1950s as part of Boston's Central Artery, which essentially is a downtown distributor. Controversy surrounding the remaining part of that belt has been fertile ground for the Boston-area highway revolt which has the potential of having a far-reaching impact on the metropolitan transportation system as well as on future transportation decision-making in other parts of the country.

The concept of creating a Linear City in Brooklyn is, to date, the most ambitious, serious effort in this country to take full advantage of the large public investment which a highway represents. The concept's fundamental principle was to coordinate all public - and, when feasible, even the private - steps taken to meet transportation and non-transportation needs of the corridor.² The case study was started before the Brooklyn Linear City project failed, and the author had, in fact, looked to it as an effort which might be able to make good use of augmentation and meta-process strategy.

The cases are big and complex, this study looked at them essentially from the limited point of view of the hypothesized public agency³ and thus cannot claim to have examined them from all other points of view. But even at this level of inquiry, we can identify a number of phenomena which have a very direct bearing on how one can implement the proposed strategy.

² i.e. Some planners actually had the audacity to plan; they have, of course, long since recognized their folly.

³ See Assertion #1, Chapter I, Assertion #3, Chapter III and Assertions #4 & 5, Chapter IV.

Most of the phenomena fall into one of two categories,⁴ and the two categories suggest the two underlying problems: The public is suffering a crisis of confidence, and the highway agencies are suffering a crisis of solutions. As a consequence all parties involved in the highway controversies - the lay actors who are against highways, the lay actors who are for highways, and the professionals in the public highway agencies - are dissatisfied and feel the decision-making process ineffective. There is thus a resulting third crisis, a crisis of effectiveness.

VII.A: The crisis of confidence

While there are many issues involved in this crisis, not the least of which are some basic changes that are taking place in the public's attitude toward government in general, the core issues are rather simple:

- 1) The public has come to question the highway location-design process' legitimacy in general and the highway agency's role in this process in particular
- 2) The public has begun to question the validity of basic assumptions underlying our transportation planning.

⁴ We could, of course, examine the cases from other perspectives and would, probably, arrive at different taxonomies. The important issue is to get a useful taxonomy, one which helps us solve the problem we have set out to solve. Since we are interested in finding operational ramifications of the augmentation and meta-process strategy, we need to find the operational implications of the augmentation and meta-process strategy.

VII.A.1: Accountability of the highway agency

The public has come to question the process by which highway location and design decisions are made. While the entire decision-making process is under criticism, the highway agency's role in it is under particularly close scrutiny. The public is no longer convinced that the public agency, i.e. the highway agency, is really working in the public's interest. Many lay actors see the public agency as an extension of those interests which benefit most directly from the construction of new highways; they feel that the highway agency is accountable to these interests rather than to the public at large.

The process by which the highway location and design decisions got made were not well understood by the public. In all but one case⁵ the highway agencies made no particular effort to make the decision-making process better understood, and in several instances public media-releases were made which had the effect of misleading the public into thinking that the highway agency had much less control than it actually did and suggesting that there were very compelling, and therefore controlling, federal requirements. This ignorance of what the process

⁵ The California Division of Highways uses a sequence of familiarization displays in its Los Angeles offices, relatively comprehensive newspaper releases dealing with the decision-making process, and an approach to public hearings - all aimed at giving lay actors an understanding of the highway decision-making process. This agency's concern for this is also reflected by its preoccupation with the decision-making process: witness the explicit scheduling of the planning and the design processes and the annual internal review of these processes. (See Chapter XI, particularly Sections A1 and A2.)

consisted of applied not only to the general public but it included also local officials, such as mayors and councilmen.⁶ The experience of the agency⁷ which made some efforts to communicate to the public:

- what the whole location-design process was about,
- what preceded and what followed the location-design process, and
- what the agency's, the local government's, the local interests' and the federal government's roles were,

⁶ This was evidenced, in many different forms, in all cases. In the Inner Belt case (Chapter XIII), for example, the highway agency time and again tried to make it appear that there were constraints imposed on them by the Federal Bureau of Public Roads which compelled the agency to exclude certain alternatives from the set of feasible alternative courses of action - e.g. a depressed roadbed through Cambridge, an integrated parkway design in the Fens, a tunnel under the Charles River, etc. - when, in fact, the federal agencies were pressing the highway agency to do just the opposite. It was the Bureau of Public Roads which insisted that the Massachusetts D.P.W. come to terms with the local communities before it, i.e. the B.P.R. would approve a proposed alignment or design.

In the Brooklyn Linear City case, the highway agency saw to it that State legislation, which would have allowed the agency to live up to the expressed Federal Highway Administration policy of making the most of the concept of joint development projects, never became law. (See Chapter XIV, particularly Section D.)

In the I-278 case, the Governor's office and the highway agency made a fetish out of keeping the local officials in the dark about the decision-making process as well as about the substance of the location-design process. (See Section E, Chapter XII.)

⁷ The California Division of Highways.

suggested that this is not an easy task to accomplish. It appears that the task is never completed; the agency cannot assume that it can pick up in its conversation with the public where it left off last time. Even after relatively intensive coverage of the current phase in that process in particular, some people in the highway corridor who had reason to communicate with the agency were, without exception, quite ignorant of what was going on around them.

The public's standards on what kind of community - and citizen -participation is appropriate in the making of highway decisions has been undergoing rapid change during this time covered by the case studies (the second half of the 1960s). While this can be seen as part of a phenomenon which has also appeared in many other spheres of life in the U.S.⁸ the highway agencies felt they were singled out. They perceived themselves to be the unfortunate victims of a very mis-directed revolt on the public's behalf. The highway professionals were only just getting used to receive respect, if not deference, from the man on the street for having transformed the family car into an express vehicle by having built an extensive expressway system, i.e. the interstate system.⁹ Only a few years earlier the public was much more sure

⁸ Witness the revolt in educational institutions; where students once were, on the whole, satisfied to study what school administrations and faculties perceived to be the appropriate curriculum and teaching method, the students have demanded-and, on the whole, have got-a say in these matters. Witness further, and this is even more remarkable, the determination of the traditionally unquestionable discipline in the (U.S.) military organizations.

⁹ A good description of what the Interstate System meant to the country as a whole-i.e. how its construction and its impacts were being perceived by the public at large-was given by Robert Jordan in a 1968 feature article in National Geographic: Robert Paul Jordan "Our Growing Interstate Highway System", National Geographic, Vol. 133, No. 2, Feb. 1968, pp. 194-219.

that the construction of expressways with high (in reference to automobile speed) geometric standards constituted progress - even if some people did have to suffer some hardships; now many people were not so sure any more. Most professionals were at a loss to explain the rather sudden turn in apparent public opinion but hoped that this new insanity on the citizen's part would only be temporary.

Some of the community interests perceived the highway agencies to work for those interests which gain most directly from the construction equipment industries - rather than for the general public. The highway professionals who were interviewed in the case studies, though many of them saw faults in what they had been doing and saw room for improvement, felt that this was an unjust accusation. They felt, without exception, that they were working in the general public's interest because highways benefit everyone - and that, in fact, their critics, this new breed of self-appointed "public servants" were the ones who were guilty of promoting special interests.

The highway professionals perceived it their responsibility not only to generate location and design alternatives but also to evaluate them. They felt that, as professionals they were appropriately aloof, that they were not mired in the petty-and dirty-politics of local (special) interests, who only had their own welfare in mind rather than the welfare of society as a whole.¹⁰

¹⁰ While these sentiments were characteristic of most highway professionals, highway agency policy in the Massachusetts, New York and New Jersey cases reflected it much more than in California. The California highway decision-making process had, of course, dealt with the issue to some degree. (See Section A1, Chapter XI.) Community sentiment was seen as "data" which should not be interpreted or altered by the agency but should be documented and given to the (lay) California Highway Commission along with the other data, i.e. the studies and reports produced by the highway agency.

Because the highway professionals saw the values of the local interests - who indeed were concerned with nothing but their own welfare - as, essentially, less legitimate than the values which were implicitly incorporated in the benefit-cost rationale of their highway decision-making, they felt that it would really be a dis-service to the public at large on their, i.e. the professionals', part to allow the expenditure of "highway funds" for "non-highway uses". To work in the public interest thus meant for them that they had to be able to resist local demands for special concessions; and thus the very characteristic of resisting demands to broaden the definition of "highway use" that they felt was a desirable characteristic of public servants began to be perceived - and consequently came under attack - as being the characteristic of a special interest: the highway lobby.

What role the public was supposed to play in the highway decision-making was not clear at all.¹¹ The local governments and citizen groups in several cases had substantive input that they hoped to make;¹² they expected in all cases that they would have the opportunity to do more than just endorse an alternative created and chosen by the highway agency. Most of the highway agencies' descriptions of the location-design process contributed to this understanding.

¹¹ California was an exception with its explicit, well articulated policies on "Freeway Agreements" resulting from the fact that the municipalities in California had a virtual veto power over location and design decisions in their jurisdictions.

¹² The Brooklyn Linear City concept is the prime example of this; it originated with people and agencies who were primarily concerned with the future shape of the school system in the area.

Typically, when a local official or a citizen group inquired about the status of a particular highway plan they were told that the plans, at this stage, were too preliminary to discuss, that there would be ample opportunity where they (the lay interests) could make their input once the agency had developed some good alternatives, that public hearings would in fact be held at that point. In all but the California case, however, when the alternatives were released the agency had already made its choice. The chosen alternative - either alone or along with one other alignment - was then presented to the public at a public hearing as the alternative which would be implemented, i.e. the public was notified of the agency's decision. In the cases where the public hearing was used this way, the public felt deceived. They had been of the understanding that there would be occasions where they could make an input, but the agency's alternative had jumped from "too preliminary to discuss" to the status of "too far along to make changes in it now". Unless the local interest had several weeks of advance knowledge of all the alternatives, and of all their features, they were in no position to give an intelligent response to the agency's presentation at the public hearing.

In the cases where this scenario fit, the highway agencies did not know what purpose the public hearing was to serve, other than that it was a statutory requirement which had to be met. They thus used the hearings to notify the public of what alternative they had chosen. Feeling they had been deceived, the public - and this included local governments, as well as citizen groups - did two things in response;

first, they became cynical about the highway program's purpose. Second, they resorted to a strategy of opposition.¹³ Alignment and design details were evidently not very negotiable - unless the community could make a credible threat that it would obstruct the highway in its entirety.

If the decision-making process was not geared to make use of ideas from lay actors, it was even less capable of incorporating changes in values or ideas. The process was run as a strictly sequential process; during the location-design process the higher-order network decisions were being implemented; the network decisions were a consequence of transportation systems decisions, etc. There was no room for backing up and re-examining some of the earlier, higher-order choices in the light of changed values.

The highway agencies argued that the alternatives were very much constrained by statutory requirements and by technical needs. Local interests who wanted some other alternatives looked at or wanted the process amended felt, however, that the highway agencies used these constraints mostly as convenient excuses for not changing their plans. Most highway agencies, in fact, did exhibit a double standard: they used statutory and technical constraints as hard and fast constraints

¹³ This occurred in the Massachusetts case with regard to the City of Cambridge and in the New Jersey case with regard to all of the Union County municipalities - excepting Linden.

The outright opposition to the California highway agency's proposal on behalf of Hawthorne and (later) Downey were not the result of this particular sequence of events.

when it suited them; but, when these constraints did not suit them, they took the initiative by drawing up new legislation, finding a sponsor for it, and mustering support for it.¹⁴

The way the highway agencies interpreted their responsibilities led them to evaluate the performance of the professionals within the agencies in terms of their effectiveness in getting highways built - not in the terms that the lay actors might have evaluated their performance, e.g. in terms of finding solutions that were responsive to local needs. Thus the career incentives within the agency tended to foster values which were - to some degree - at odds with, or at least insensitive to, the local interests' values. It was considered to be rather reckless for a highway professional to raise issues which were not clearly supportive of a policy to construct a highway alternative which the agency had determined as the best one.

¹⁴ The creation of new legislation played some role in all of the cases. In California the highway agency drafted legislation, and obtained the help of the local democratic, black legislator and of the conservative, republican governor, to allow the agency to compensate dislocated residents more equitably. In New Jersey the highway agency, the governor, and a federal congressman worked together to draft-and get put into law-federal legislation allowing the State of New Jersey to safeguard its allotted share of the federal highway trust fund even if it could not build the highway for which the funds had been allocated. In Massachusetts, the highway agency and a sequence of governors worked to create legislation which would take the veto power away from the communities which obstructed the construction of the Inner Belt-the veto power had, not long before that, been given to the key communities through a piece of legislation by anti-highway legislators. In New York, special legislation was needed to allow the highway agency to cooperate with the City of New York in a manner that would make it possible to create Brooklyn Inner City. The agency and the governor made their key move, in their effort to prevent the project from becoming reality, by introducing the necessary legislation but then seeing to it that it would not become law.

In one rather dramatic instance,¹⁵ a career highway professional did, however, have the courage to raise a host of questions in the bluntest terms, in the highest circles of the agency. His remarks could not be dismissed as those of an irresponsible individual because he had too distinguished a career behind him, in fact, he was very near retirement age. What is of greatest importance is the fact that the highway administration listened. The agency brought the location-design process to a halt on its own - not because local interests demanded it, but because the agency realized that local interests would be seriously hurt if the process proceeded on schedule and that the interests in question were not represented in the decision-making and did not seem to realize the impacts the highway would have. This development is important to us because it means that highway agencies can, potentially, raise the impact issues which in most cases were raised by the public and played down or denied by the highway agencies.

VII.A.2: Validity of basic assumptions

The public has begun to question some of the basic assumptions underlying our transportation-planning rationale which too many practicing professionals have not had the courage to question. Lay actors have begun to argue that we should decide what kind of transportation we want rather than just keep providing more highways because more cars are being sold.

¹⁵ The speaking-out by Rudolph Hess (See Section F, Chapter XI) is a real exception to behavior of professionals in highway agencies. The California Division of Highway benefited immeasurably by it, and its merits a study of its own far agencies to determine how they might encourage more candor on the part of their professionals.

The transportation systems decisions and the highway network decisions, whether they had been made overtly in the form of a plan,¹⁶ or whether they were implied in the status quo,¹⁷ were considered to be firm and settled by the highway agencies. The less structured the systems - network - location - design sequence of decisions was, the more paranoid the agency was about reconsidering earlier, higher-order decisions.¹⁸

The highway agencies, in all cases, proceeded under the assumption that the location-design process constituted simply the follow-up of an already made network decision. Therefore there really was no question whether the highway should be built or not, and the interests who were raising such questions were given to understand that they should have raised them earlier. The agencies, in fact, felt they had a mandate to implement the network decisions. One other responsibility which all of the agencies felt they had - and no-one appeared to disagree with them - was to get as large a share of the highway trust-fund, i.e. federal funds, allocated to their state. The way to do this, of course, was to spend highway funds, i.e. to build highways that were on the interstate system.

¹⁶ e.g. the Master Highway Plan of 1948 for Greater Boston which laid down the concept of a system of radials and circumferential belts.

¹⁷ e.g. the relocated Bushwick Expressway in Brooklyn, New York

¹⁸ Note that in none of the cases was there a very good process for making the systems decisions. This may largely be due to the fact that transportation modes other than the automotive mode have no major funding source. The highway network decisions were, in all cases except California, no longer accessible for review by anyone-or so it seemed. In California there is an automatic, annual review of the legislatively established network; while this does not assure a thorough review of the validity of proceeding with implementing the network that is on the books, it does at least recognize that a review may be necessary and thus leaves the door ajar for reconsidering earlier decisions.

Implementing the location-design decisions has been taking several years, and implementing network decisions has been taking a generation or two. Local values, local priorities, and consequently local goals - as well as their counterparts in the larger, non-local society - have been undergoing changes while the highway agencies found themselves trying to implement choices which had remained static.

The range of highway alternatives which were considered by agencies - and, for that matter, by most lay interests as well - was very narrow. The Brooklyn Linear City concept was seen by the highway professionals as being unrealistic; they really did not need to take it very seriously. They had a responsibility to construct a highway, and what was being proposed would have forced them to spend time and money looking at many non-highway issues just because the concept focused on the highway as the catalyst for a number of developments for the local community. While the highway agencies did not necessarily use benefit-cost analysis to make their devices among alternatives, they did use a benefit-cost rationale in defending their choice. As such, the benefit-cost rationale transcends its use as an economic rationale; since all construction costs but only the user benefits enter the equation, a more expensive alternative with higher non-user benefits¹⁸ can never be preferable to a less expensive alternative.

Highway planning was carried out with the implicit-and sometimes explicit - assumption that it (i.e. highway planning) was just one component of planning, that there were other components that

¹⁸ Such as the anticipated benefits of Brooklyn Linear City to the local school system ...

were being carried out, such as open-space planning, housing planning, etc. as part of a comprehensive planning program. Highway agencies therefore only needed to get a sign-off from the various agencies responsible for the other (i.e. non-highway) planning to assure coordination. None of these agencies, however, had funds of the magnitude that highway agencies did, to implement their plans; consequently whatever plans they may have developed, they had not the thrust behind them that the highway trust fund put behind the highway agencies' plans. The assumption that viable planning for the various other components of a city was being performed by other agencies, therefore, was based on myth.¹⁹

The highway agencies proceeded under the assumption that they, not the public, could - and should - choose the alternative. In at least one case²⁰ a highway agency was sufficiently jealous of any

¹⁹ The issue of meshing highway planning with comprehensive planning in a more meaningful way has been addressed by a number of writers. Morehouse wrote a provocative article on the subject in the A.I.P. Journal and appears to have initiated, thereby, a two-way conversation on the subject.

Thomas A. Morehouse "The 1962 Highway Act: A Study in Artful Interpretation", Journal of the American Institute of Planners, XXXV (May, 1969) pp. 160-168. Comments in the same journal by: Douglas J. Carroll, Jr. (July '69) p. 290, Robert Einsweiler (July '69), p. 291, Reply by Morehouse (Nov. '69) p. 416, Jack Kinstlinger (Jan. '70) pp.74, 75.

²⁰ See Section D1, "After the Defeat of the Highway", Chapter XII.

infringement on its power to choose, that they rather gave up building any highway between the two pre-established termini than let local interests play a major role in choosing the route.

All but California highway agency²¹ had a policy of keeping its studies secret for as long as was feasible.²² Secrecy on the agency's part was never received well by the public, neither by the press nor by the local interests.

The location-design process was designed on the premise that the local officials - usually the city engineer, the planning office, or the mayor - could provide whatever input the professionals in the highway agency could not make. As some of the cases demonstrated, however,

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It had a policy of keeping certain steps - e.g. the District's recommendation of an alignment to the State highway engineer-within the location-design process secret. See Planning Step #10 in Section A1 of Chapter XI.

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For example, one agency entrusted the author with a map of a number of alignment alternatives, provided he did not make them public. The alternatives have been worked out by the agency and it believes the alternatives are reasonable. It felt, however, that the public should not know about them at this time because it, the agency, may want to build one of these at some future date. (The case studies do not reveal which of the agencies was involved here.)

Local officials were not necessarily tuned in to the local values.²³

In some cases, in fact, the highway agency proved to be more sensitive to the local vibrations than the local elected officials were.²⁴

Several of these assumptions which were implicit in the decision-making process, when put together, suggested that:

- 1) the highway agency could determine within what kinds of constraints they should work;
- 2) only the agency could generate the alternatives, and
- 3) the agency should evaluate all (its) alternatives and choose the best one.

²³ The California Division of Highways' experience with the City of Downey (See Section G, Chapter XI) is a clear demonstration of this. Although the city government was very active in determining Century Freeway alignment decisions; in fact, the city took the initiative and, probably more than any of the other municipalities in the highway corridor, it got its way. And yet, it appears that this same city government was sufficiently out of touch during all this time with some of the local interests so that it became necessary for the government to reverse its stand completely very late in the location-design process. Since the highway agency had depended completely on the city government for local input, it found its location-design process every bit as limited as the local government's understanding was of the potentially affected interests' values.

In the Massachusetts case, the Cambridge Planning Board appears to have had quite a different understanding of the local values from the way the City Council perceived these values. This was of no consequence, however, since the highway agency made no effort to understand what the locally held values were.

²⁴ This was certainly the case in Watts-Willowbrook (See Section F, Chapter XI) where the highway agency was the only body that was concerned about the large negative impacts that were anticipated for the community. The agency appealed to the City of Los Angeles and to the University of California's Urban Laboratory to speak as advocates for the local residents but neither of the two were willing to take on that role, and the highway agency itself had to play the role of the local interests as best it could. It proved, of course, that it was quite capable of doing so.

In several of the controversies the public questioned the agency's qualifications for doing all this, and it raised the issue of whether it is wise at all to expect an agency to be the judge of its own work.

The administrative and statutory constraints which operated on agencies and on the process were changing - but only under long and constant pressures. Rarely did an agency take it upon itself to get some constraint relaxed - even though the professionals readily admitted that the constraints prevented them from doing a better job.²⁵ Relocation provisions were changed and humanized years after the relocation provisions for urban renewal - which constituted a scandal in themselves - were updated. The definition of highway-use began, and is continuing to be, broadened at a snail's pace. Only the most sophisticated of the highway agencies took the initiative in addressing the problem of basing the payment to a displaced home-owner on something more realistic than the fiction of a "fair market value" under the assumption of a willing seller.

One basic assumption, which has been accepted not only by highway agencies but also by local governments, has been the belief

²⁵ The classic issue is cost. The highway agency ruled out a particular alternative suggested by the community as being "prohibitively" expensive, implying - and sometimes saying it explicitly - that it was the Federal Highway Authority or the Federal Bureau of Public Roads which would do the prohibiting. In fact, "prohibitively" expensive usually simply meant that the agency thought it could get by with some alternative which was cheaper. This is pointed up by the fact that in several instances the highway agency came around to propose the very alternative that was supposed to be prohibitive in cost, once the agency realized that the cheaper option was really ruled out.

This happened, for example, in regard to the elevated vs. depressed highway issue in Hawthorne, California and Cambridge, Massachusetts.

that for the general public to benefit someone has to get hurt; "you can't make an omelette without breaking some eggs". Two things happened: 1) some interests questioned the truth of the maxim and asked "Why?" while 2) others asked "Who should get hurt, and how badly?"²⁶

VII: 3 The crisis of solutions

Building urban expressways is inherently disruptive because expressways, besides being mammoth objects, cannot be placed just anywhere; a highway's possible locations in one area are dependent on its location in the adjoining areas. It staggers one's imagination trying

²⁶ In Section B2, Chapter III, the concept of an inherently fair process was discussed. It is conceivable that an agency could ask the interests who happen to be in the corridor of a highway to carry very inequitable burdens of highway impacts - if the process by which the highway were located were perceived to be an inherently fair process. This would require, however, that no one would question the necessity of the highway. There was, now and then, a half-hearted attempt to sell the highway's absolute necessity on the basis that it was a part of the National Defense System, that, therefore, the question of "Why" was not a legitimate one.

While the motion of having missiles moved about the country might have played a role when the Interstate System was first conceived, it no longer played any real role in defense thinking. Most highway professionals recognized this and tried to sell the highways on the basis that they had a benefit-cost ratio greater than one. This, however, made it perfectly legitimate to ask very fundamental questions. A predicted benefit-cost ratio greater than one means that, on the whole, society will be better off with the highway than without the highway, i.e. that the positive impacts outweigh the negative impacts. - But, if that was so, people began to wonder, why should anyone be asked to suffer without full compensation?

to identify the many different impacts an expressway has in a city.²⁷
 And yet, the location-design alternatives that were typically generated, had just four features:

- 1) an acquisition program to purchase the property in the right-of-way,
- 2) a relocation program for residents and businesses in the right-of-way, (usually contracted out to some other agency),
- 3) a two-dimensional alignment, and
- 4) a three-dimensional geometric design.

The alternatives would have benefited from broadening the number of features to correspond closer to the number of impacts the highway was predicted to have.²⁸ The crisis of solutions can be summed up with these issues:

- 1) Significantly new and fresh ways of looking at the problem were dismissed as unpractical.

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It certainly staggered that of Jeffrey Tryens who, at more than one point, tried to identify them all; see the discussion in: Marvin Manheim, et al, Community Values in Highway Location and Design: A Procedural Guide, (Cambridge, Mass.: M.I.T. Urban Systems Laboratory Report, No. 71-4, 1971), Chapter VI.

²⁸ Schneider sees the poor fit between the typical highway being designed and the problems of the community that the design should respond to as an instance of our contemporary society's failure to make our urban environment responsive to people's needs; he speaks of "a crisis of humanism."

Kenneth R. Schneider "The Destruction of Urban Space", Traffic Quarterly, XXIV, (Jan, 1970), pp. 59-76.

John von Neumann (best known for his collaboration in Theory of Games and Economic Behavior with Oskar Morgenstern) addressed the same issues on a more general basis in a Fortune article: "Can We Survive Technology?" Fortune, June, 1955; pg. 106.

- 2) There were disagreements between the highway agency and some actors on what constituted an undisputable fact and what constituted a conceptual model.
- 3) The highway agency failed to perceive many of the lay actors' problems.
- 4) The agency did not try to incorporate constructive suggestions when they were made by lay actors.
- 5) The alternatives generated by the highway agency did not give the lay actors the opportunity to explore their own values to find out what their priorities really were.

VII.B.1: Dearth of Fresh concepts

Not enough new concepts were sought: inadequate solutions were used as exemplary models, and significantly fresh ways of looking at the problem were dismissed as impractical.

The alignment and design alternatives generated by the highway agencies, in all of the four different cases, were essentially the same. They showed very little differences as a consequence of being in different contexts. In none of the physical designs chosen by the agencies did aesthetics play a major role from the start; where it did become a consideration at all, it was injected from outside the highway agency, and the improvements that were made were considered "concessions". The cost, in dollars, was the controlling criteria for differentiating designs.

In all but one case²⁹ the alternatives produced by the highway agency consisted only of a right-of-way with a ribbon of concrete; only in that one case did it include a specific component designed to deal with the impact the highway had on housing.

Local officials were not really much better³⁰ in thinking of solutions which could begin to address a wider range of the many highway impacts. They too tended to think in terms of a two-dimensional alignment and a three-dimensional design. There were, consequently, very few variables for augmenting an alternative - and making it more acceptable.

The highway agencies also were very defensive about the location-designs they had created; they tended to perceive any suggestions

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The exception was the rather innovative housing replacement component added to the design of a section of the Century Freeway. See Chapter XI: Watts-Willowbrook Issues.

The Massachusetts Department of Public Works, on a couple of occasions dabbled with the idea of using some innovative concepts for physically meshing the highway better into the local urban environment. It engaged one of the best-known architectural firms and asked it, in collaboration with other consultants, to create some basically different and better designs. But the highway agency never really had its heart in these explorations. No one was very much surprised when the products of these explorations were shelved as "prohibitively" expensive options.

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The outstanding exception to this, of course, was the Brooklyn Linear City concept proposed by local school interests and supported very strongly by the New York City Plan Commission.

that were made to them for added or changed features as criticisms of their designs. Ideas which came from the public thus usually fell on deaf ears, and the agencies failed, in most instances, to take advantage of some very promising ideas which had been put to them.

The most ambitious concept of creating a very comprehensive alternative by packaging a very wide range of features into one design, Brooklyn Linear City, should have - one might think - excited highway planners, but it did not. The concept came from outside the agency and, for all intents and purposes, it stayed outside.

VII.B.2: Disputes about facts

Means-ends relations which the highway agency dealt with as being strictly factual, i.e. as being mechanistic relationships, were viewed as teleological connections by some lay actors. There were disagreements as to what constituted a fact and what constituted a conceptual model.³¹

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As important and central a concept of "accessibility", for example, was usually not dealt with. The Massachusetts DPW used the "proximity" and "closeness" as synonyms with "accessible". The facts of an area's proximity and closeness to the highway tells us a lot about the kind of negative impacts the highway will have on the area in question but does not tell us how accessible the area will be from the highway - that, if anything, proximately tends to interfere with accessibility for large traffic flows - was never cleared up. The concept of accessibility remained confused with the facts of closeness and proximity.

Although the highway agencies prided themselves on assembling great amounts of data, most of them did not generate data which might have been useful to settle some of the major issues. With one exception, the agencies did not make comparisons of the relative severity of impacts suffered by different actors - e.g. municipalities, in most instances where impact questions arose, there were considerable discrepancies in predictions. Even with very elementary facts - such as dwelling units to be taken, jobs to be displaced, or taxable property to be removed from the tax rolls - disputes about huge discrepancies arose.

In less elementary issues, controversies arose because agencies dealt with concepts as if they were facts.³² "Fair market value", a highway agency concept, for example, meant entirely different

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For example, the State DPW gathered great amounts of data in 1927 and 1945 (See the introductory pages of "The Inner Belt in Greater Boston, Massachusetts). While this origin and destination data was used in developing later plans - particularly the 1927 Whittier Plan and the 1948 Highway Master Plan with its system of radial and circumferential highways - the basic design concept of the Greater Boston highway network is a creature of invention. The Bradford Commission invented - or had its consultant, Charles Maguire and Associates, invent the concept of a highway network consisting of radials and circumferentials. The origin and destination data could be used to determine the various links' sizes, and the conceptual network could be examined vis-a-vis the origin and destination data to project how readily the network can fulfill the area's traffic needs, but in no way did the traffic data, which have to be viewed as cold facts, amount to the radial & circumferential highway network. The network was a creation of the imagination, a concept.

And yet, this concept was dealt with by the highway agency for twenty years from 1948 to 1968 as if it were a compelling fact; only after 1969 did the agency undertake ramifications of building a slightly different network. (See Section F of Chapter XIII.)

things to different people.³³ Other concepts, such as "noise impacts" were often discussed but, though they could be quantified, they rarely were. In the cases where noise and vibration impacts were quantified, a translation was necessary to make the quantification meaningful to the lay interests but then the issue was resolved; either the predicted impact levels were acceptable, or they were not.

Most agencies used statements about economic impacts and impacts on the local traffic, but they usually were not ready to operationalize these concepts where it became possible to settle issues with them. Part of the reason for this is the fact that the highway agencies' defensive posture put great pressures on the professionals within the agency not to find - in fact, to ignore- negative impacts of the highway. This led to the generation of amazingly unreliable, biased data and contributed to the lay actors' mistrust toward the highway agencies.³⁴

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"Fair market value" was a figure of compensation that a highway agency developed by following a particular procedure; the procedure was aimed at calculating what the price of the property might have been if the involuntary seller were selling voluntarily and if the highway were not there. The procedure usually consisted of sampling the sales prices of similar property that was recently sold on the regular real estate market on either side of the highway corridor - but beyond the range of any noticeable highway impact on those prices - and constructing a price-profile across the highway corridor.

"Fair market value" thus had nothing to do with what it might cost the displaced family or business to replace the property they were forced to sell; it had nothing to do with the sense of "fair" which might be based on the principle of making the dislocated family or business whole again.

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Witness the skepticism with which impact predictions of the highway agencies in the New Jersey and the Massachusetts cases were greeted. Observing, for example, the predicted dislocation of people and businesses in the first few segments of the Inner Belt (See Sections A, B and C of Chapter XIII) vis-a-vis the later reported actual dislocation, we cannot help but understand the skepticism.

The highway agencies were not alone in this, however. One municipality commissioned a demographic study to help it prove a particular point. When the study came out "wrong" - i.e. it did not support the argument that it was expected to support - the municipality took steps to suppress the study and keep its findings secret.³⁵

VII.B.3: Refusal to recognize non-highway problems

The highway agency did not appreciate all of the lay actors' highway impact-related problems, much less their problems unrelated to the highway, all of which formed the context in which the lay actors perceived the highway.³⁶

Some communities had problems of their own - even without the introduction of a highway - which could, however, affect 1) the community's ability to deal with the highway's impacts and 2) the

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Since we can learn our lesson without disclosing names, the case studies do not reveal which municipality and which specific agencies were involved.

³⁶It also becomes rather important where the line was drawn between highway problems and non-highway problems. For example, the DPW dealt with the predicted highway impact of causing an exodus of the middle-income North End residents, leaving those behind who could not afford to get out of living "in the shadow of an elevated expressway". (See Section A, Chapter XIII), as a non-highway problem, - which is to say they did not deal with it at all.

chances of winning the community's endorsement of the highway.³⁷

Although the highway agency was not expected to solve these non-highway problems, there were opportunities where the agency could use the construction of a highway as an opportunity to contribute to the solution of such problems.

When one agency did help fund the preparation of a Model Cities application for an area that was likely to be impacted - Model Cities application which otherwise might never have been completed - it was a real exception to highway agency behavior.³⁸ Highway agencies shied away from bending the highway, and the location-design process,

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The Brooklyn school problem belongs to this category. The consultant to the public school system recognized that the controversy about campus-type inter-racial schools versus de-facto segregated community schools had completely ignored the fact that a major highway was being planned through the area, possibly taking some of the land that the schools intended to use and, what was even more important, it would most likely create a very real physical barrier which would interfere with the redistricting that was contemplated to achieve racial integration. (See Section A, Chapter XIV). The school system and the City of New York took up the consultant's recommendation to design the new school system, the highway, and possibly other elements of the local urban fabric, jointly - in one huge joint development project - rather than separately. The highway agency failed to grasp the importance of the concept and missed the opportunity to make a contribution to the community far beyond the contribution it can ever make by designing a conventional highway, and it could have done so without compromising in the least any transportation objectives it was pursuing.

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See Section F, Chapter XI.

in the least even if it might have meant solving some major problem for the community. While reluctance on a highway agency's part to get involved in a quite unrelated problem might be understandable,³⁹ to refuse addressing a community's transportation problems - including the problem which an expressway can't solve - is harder to justify. Communities with mass transportation problems and local circulation problems did use the degree of the highway agency's willingness to tackle with these as a measure of the agency's responsiveness.⁴⁰

Local problems and changes in values of local interests did not appear to change capriciously; it appeared feasible to predict most of these problems long in advance, and highway professionals did

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-though not forgivable if the agency is supposed to work for the public good...

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The New Jersey Department of Transportation, for example, said as much as: "since the Union County municipalities would not let us build the I-278 extension as we wanted to build it, we will not make any other transportation improvements in that area either; we will let them choke in their congestion..." (See Section D1 of Chapter XII).

In the Brooklyn Linear City case, it turned out, the highway agency was every bit as un-interested in incorporating mass-transit in the corridor, i.e. in Brooklyn Linear City, as it was un-interested in incorporating public schools and other community facilities,

seem to be at least as capable to make these predictions as were local officials.⁴¹

VII.B.4: Failure to recognize possible alternative solutions

From time to time possible solutions, or parts of possible solutions, were suggested by lay actors but were ignored by the highway agency - for a variety of reasons.

Highway agencies displayed two characteristics which are relevant here. First, they displayed a capacity to ignore promising solutions, or partial solutions, which were either suggested to them or which cropped up relatively late in the location-design process. Second, they demonstrated to have the capacity to identify the issues which prevented them from producing better alternatives as well as, or better than, critics outside the highway agency.

Suggestions which had not adequately been dealt with kept being re-introduced by lay actors from time to time. Thus, even if a suggestion had no merit, it appears that the only way the agency could put the idea to rest would have been to explore publicly its advantages and disadvantages in such a way that the public would be satisfied that the idea, indeed, did not have any merit. If an idea did have some

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While the demonstration of the highway professionals in the California case is the clearest demonstration of this fact, interviews with highway engineers and administrators in other states - particularly New York - suggest that the California highway engineers are not entirely unique in this. It is not as difficult to get the highway engineer to understand the lay actors' way of perceiving the highway as it is to provide him with the opportunity to make constructive use of this understanding.

merit - the agency put itself in a very bad light by not trying to incorporate those features which could have improved the alternative under consideration.

The highway agencies also failed to make the most of criticism which, in many instances, could have been used to develop better alternatives. Much of the specific criticism of alternatives lent itself to amelioration by incorporating measures in the alternative geared directly to the task of overcoming the shortcomings which were the subject of the criticism.

The demonstration by highway professionals that they could identify an alternative's shortcomings, and that they could prescribe which constraints needed to be relaxed to overcome these shortcomings - provided they did not have to risk their careers to do so - is disarming. It suggests several things: first, it appears that not only the special scientist can identify socio-political issues but that the highway engineer can, potentially, do so too. Two, the incentive system within the highway agency is preventing professionals from being responsive to the public's needs. Three, a model which describes the highway location-design issues in terms of a struggle between highway agency versus public is inadequate.

VII.B.5: Exploring community values

Lay actors, generally, did not articulate their values; rather, they expressed their values by reacting to specific proposals, with a full range of expressions from outraged opposition to full support. They also, at times, make substantive suggestions of their own. In very few

instances did highway agencies explore the community interests' needs and wants by bargaining, in a searching way, for the ingredients of an alternative that appealed to their values.

The same applied to the decision-making process; interests had quite different desires for levels of participation. Some wanted to play an active role, even the leading role, in the development of alternatives;⁴² others wanted only to have the option to participate, and still others could not have cared any less about it. The agencies were no better in helping the various interests find their own best role in the process than they were in helping them explore their values about the substantive alternatives. This was, of course, largely due to the fact that the agencies did not particularly like any local interests' participation, just as they were not looking for anyone's substantive input.

The agencies made no overt efforts to adjust their location-design criteria to the changes which were occurring to the values of individual interests and society as a whole. Far from being sensitive to value changes, they typically proceeded with a tunnel-vision of their perceived mission until they ran into out-and-out opposition and were forced to consider changing some of their location-design criteria.

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This was certainly the case in the New York case where the City of New York Planning Commission and School Department took the lead.

VII.C: The crisis of effectiveness

As was shown in VII.A, not all actors agreed on what the highway agency's responsibilities and authorities were. But, even though each actor appeared to have his own interpretation of what the agency ought to be accomplishing, all of them - including the highway agency itself - felt that it was not doing so.

Overcoming the crises of confidence and of solutions is a prerequisite for the highway agency to become more effective in carrying out any mission. Besides this, however, there are a few problems which contribute strictly to the agency's ineffectiveness; they would have to be dealt with, no matter what the mission we wanted the agency to accomplish.

- 1) The highway agency had little credibility.
- 2) Two-way communication between the agency and the public was poor.
- 3) The various actors, including the highway agency, tended to become polarized.
- 4) The highway agency worked more on trying to prove a point than to search for consensus on a course of action which is desirable, feasible, and equitable.

VII.C.1: Agency credibility

The lay actors felt that they did not receive enough information from the highway agency and yet, when the agency did make statements or give releases, it generally was not believed. The information was received with skepticism; the highway agency had little credibility.

The fact that most agencies had a policy of keeping at least some aspects of their activities secret at some point in time, led

local officials and community groups - even the press - to suspect that the agency was not levelling with them completely, that something was probably being withheld from them. In essence, then, the mere fact of having a policy of partial secrecy on some issues tended to undermine the agency's credibility on all issues.

The compelling forces which existed inside the highway agencies, for their professionals not to come up with predictions of negative impacts and not to come up with findings that were critical of past agency policies, were generally understood by all participants and perceived to be the real motive for policies of secrecy.

The only agency which maintained reasonable credibility and still was able to keep one step or two of the location-design process completely within the agency, i.e. secret, did so by 1) being candid⁴³ in its impact predictions - and being known for this - on the one hand and 2) making it quite clear which reports and official recommendations were staff functions and thus would not be released to the public.

Most damaging to agencies' credibility were perceived covert, unacknowledged policies of secrecy. Time and again local interests felt that an agency was withholding predicted negative impact data and that the information that was being released was biased.⁴⁴ In the same vein, the public frequently perceived studies, ostensibly carried out to determine a course of action, as after-the-fact justifications for

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The California Division of Highways, District 7 office, was candid, not so much in absolute terms as in relative terms - i.e. relative to the other highway agencies, in predicting negative impacts and their incidence on the various interests.

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This was particularly the case in the I-278 extension and in Boston's Inner Belt.

choices already made rather than as the basis for decision.⁴⁵

Lack of credibility prevented meaningful negotiation from occurring even when an agency really wanted to negotiate substantive issues.

VII.C.2: Two-way communication

In most cases, as is clear from our previous discussion, there was very little two-way communication between highway agencies and the public.

First, it was not always clear who represented whom and should therefore be communicated with. The local officials in the City Halls felt that they were the only real representatives of the local interests, and the highway agencies tended to agree with this point of view. The agencies may, however, have been less concerned with political philosophy in general and representative democracy in particular than in the fact that City Halls, in general, did not give them nearly the trouble the citizen groups did. This is suggested by the fact that in some cases where the municipal governments became the highway opponents, the highway agencies tended to treat them - when they could - like any of the other obstructionists.⁴⁶ Many of the

⁴⁵One reason why communities could understand this, was the fact that they did the same thing. When the City of Cambridge hired Barton Ashman, for example, they established enough constraints to leave absolutely no question about what the consultant's recommendation would be.

⁴⁶Witness the highway agency's refusal to release information to such municipalities both in New Jersey and Massachusetts. The California Division of Highways, with the municipalities holding a virtual veto over the highway, had to - and did - respect the local government's rights. See Design Step #2 and #5 in Section A.2 of Chapter XI.

local interests, however, had as little confidence in their municipal officials as they did in the highway agency.

Second, with the agencies' prevailing behavior of 1) failing to respond to positive suggestions being made by local interests and of 2) dismissing criticism as being motivated by "special" interests, while the agencies' own motivation stemmed from a concern for the "public" interest, local interests could not very well be expected to continue trying to communicate about suggestions and criticism in a constructive sense.

Bureaucracies generally are impersonal; the individual who wants to make contact with one finds it frustratingly difficult to locate the right office to hear his problem and the right format to plead his case, - i.e. a responsive ear. Add to this the fact that the highway agency personnel, generally, would rather not have met with the public - because the public consisted only a special interest - and one has the description of a kind of officialdom or technocracy that the layman had a very difficult time communicating with.

Most agencies felt that it was a real shortcoming on their part that they did not make more of an effort to communicate with the public. Many professionals would say things like: "we never were very good in public relations; we just don't have the time or budget for it." Not having the time or budget for it meant, of course, that community interaction was relatively low on their list of priorities.

VII.C.3: Polarization of actors

The highway agencies' attitude that "there always were bound to be those few who were opposed" contributed to the fact that the

public's tactic of opposing the entire highway - in order to get the agencies to negotiate on some location and design features⁴⁷ - went rather far and thus lead in most cases to a polarization of interests into a pro-highway camp and an anti-highway camp. There were also many other, smaller incidents which contributed to polarization. The agency dismissing lay actors' suggestions out of hand and vice versa, the public being suspicious of anything the agency proposed, fed - when these things occurred - mutual mistrust and hostility; each saw the other as unreasonable, self-centered, anti-social, obstructing real progress, ... evil. Once interests were polarized they saw each other only in the worst light.

Polarization did not appear to be inevitable in all cases; there were some developments which suggested that it might well be prevented.

One, being negatively impacted did not mean that actors necessarily became polarized.⁴⁸ What was much more determining than how an actor was impacted was his perception of the other actors' and the process' fairness, within the existing constraints. Two, the concept which made the most of a highway by using it as a catalyst for community development involving all kinds of transportation, education, employment, business, housing, etc., even planning the interfacing of the community's ethnic groups - stemmed from outside the highway agency. The community interests were willing, even desirous, to give the highway a far more central role in the community than the highway professionals were.

⁴⁷See Section A.1, on accountability, in this chapter.

⁴⁸The reaction of people who were dislocated by the first segment of the Inner Belt (See Section A, Chapter XIII), is quite telling. Even though

VII.C.4 Lack of Consensus

Consensus on the choice of a course of action, where and when it was achieved proved a short-lived phenomenon.⁴⁹ Just because agreement existed at one point in time did not mean that it would maintain itself; values could change enough even in a year's time to change an endorsement into opposition.

In most cases, highway agencies did not search for consensus. They tried to prevent outright opposition by addressing themselves (at best) to the amelioration of negative impacts; they did not try to cultivate active supporters for a course of action by designing alternatives with specific, locally desired, positive impacts.

The policy of highway agencies not to incorporate in their alternatives all the good ideas that were feasible, from suggestions of lay actors, had the result that many local interests sincerely felt that they knew of a better solution than the agency was proposing. They thus could not support the agency's alternative. The kind of impact-by-impact and feature-by-feature negotiations between all interests which could result in putting together an alternative supportable by each actor, never took place.

they suffered severe hardships, receiving no reimbursement for moving expenses, they nevertheless felt that the construction of the highway constituted progress which justified their dislocation.

⁴⁹See for example Chapter XI: The Downey Controversy.

VII.D. Summary

Too many of the highway professionals see themselves as the custodians of the social values; they, consequently, do not feel it is necessary to develop location-design alternatives which respond to the diverse values of the various individual interests who are potentially impacted, and they do not see it necessary to constantly realign the definition of the problem, the decision-making process, and the constraints within which solutions have to be found, - with the constantly changing and evolving cultural values held by the public. As a result, we can identify three kinds of crises that are besetting the relationship between the public and highway agencies: a crisis of confidence, a crisis of solutions, and a crisis of effectiveness.

The cases show clearly, however, that the highway professionals are capable of perceiving meta-process problems and that they are able to look at the highway issues from a lay actors point of view (at times) long before the lay actor can perceive a potential negative impact. It appears, therefore, that the highway agency can play a role which can earn them the public's confidence and that it can develop alternatives which respond to the lay actors' values. Lay actors, in fact, have demonstrated that they are not inherently more compassionate or more imaginative than highway professionals. Neither the lay actors nor the highway professionals appear to have all the answers, and the strategy of augmentation and meta-process ought to take advantage of the lay actors' and of the highway professionals' potential contributions to the development of alternatives.

CHAPTER VIII

AN APPROACH TO COMMUNITY INTERACTION

VIII.A. What are Community Interaction Activities?

VIII.B. Community Interaction Objectives

VIII.B.1 Meta-Process Objectives: Community Interaction
Objectives for a Responsible Agency and a Fair
Process

VIII.B.2 Augmentation Objectives : Community Interaction
Objectives for Responsive Solutions

VIII.B.3 Community Interaction Objectives for an
Effective Process

VIII.C. Summary

ABSTRACT

A program of community interaction - which is the interface between the highway agency and the public - serves as the vehicle for implementing the strategy of augmentation and meta-process. The community interaction program focuses the location team's attention on three categories of objectives which correspond to the three crises that were identified in the case studies: responsibility, responsiveness, and effectiveness.

The objectives in the first category address themselves to the need for a responsible public agency and decision-making process:

- establishing and maintaining agency and process legitimacy,
- maintaining validity of earlier decisions.

The objectives in the second category are aimed at producing and augmenting alternatives to create responsive solutions; they are:

- formating new concepts,
- establishing facts,
- detecting and anticipating community problems,
- finding solutions,
- exploring values.

The objectives in the third category are intended to enhance the chances of having a responsible location team and location design-process and finding a solution which is responsive to the community's values by providing a climate for community interaction and by serving the direct needs of that interaction. They are:

- establishing and maintaining credibility,
- communicating,
- searching for consensus,
- depolarizing interests.

We determined in Chapters V and VI that, in order for augmentation to be feasible, the public agency must have intimate knowledge about the community's preferences for alternative courses of actions, and it must have a good understanding of who these interests are if it is to design augmentation in response to the specific needs of particular lay actors who make up the community. We also argued in Chapter VI that lay actors could best bring their values to bear by making a direct input to the decision-making process - that this had the great advantage of not having to articulate and then translate the local interests' values. In the discussion of the meta-process we also pointed out the need for the public agency to have intimate knowledge of the community's norms, standards, and accepted procedures for setting disputes or making compromises. As with augmentation, the public may be able to participate directly in the meta-process activities, such as determining what kind of trade-offs are permissible or designing an acceptable decision-making process.

One of the things we found in the case studies was that neither the public agency nor the community appears to be inherently better at having useful insights, that both are - at times - capable of making very good augmentation or meta-process suggestions. This suggests that the public agency - local interest interface, i.e. the interface between the public agency and the community, be designed so as to enhance mutual understanding and to seek out, find, and use all useful ideas which can possibly contribute to the creation of alternative courses of action. The strategy of augmentation and meta-process depends on the public agency having a good, even empathic, understanding of the local

interests. For a lay actor to participate in the decision-making effectively, he - for his part - must understand the public agency, the alternatives, their consequences, and the decision-making process.

Let us try then in this and the next chapter to translate the dynamic aggregation process developed in Chapter VI into an approach to community interaction. The approach is aimed at realizing the public agency - local interest interface' potential for facilitating application of the augmentation and meta-process strategy in the case of highway location design.

VIII.A. What are Community Interaction Activities?

There are a wide variety of interests - represented by individuals, groups, and institutions - which make up the community. No single interest is representative of "a community"; the term "community" refers to the whole collection of interests. Public relations is one kind of activity in which a public agency has traditionally engaged; community involvement and citizen participation activities are concepts which have gained currency during the 1960s. Community Interaction, however, is a very broad concept; it includes public relations, community involvement, citizen participation, and much more:

- 1) Community interaction includes all the ways by which the location team¹ learns about the community, all of the activi-

¹The location team consists of the highway agency personnel directly

ties the highway agency may initiate in its effort to understand the various groups, individuals, and institutions, - i.e., all of the interests - which make up the community.

- 2) Community interaction includes all the ways by which the community learns about the location team, about the range of alternative courses of action, and about their respective consequences.
- 3) Community interaction includes all the ways by which the location team and the community work together, negotiate, and come to terms by reaching agreement on a course of action.²

Community interaction is a label for the entire interface between the highway agency and the community.

VIII.B. Community Interaction Objectives

A program of community interaction is to serve as the operational vehicle for carrying out the strategy of augmentation and meta-process.

responsible for the location-design work. In a very small project the location team might consist of one or two highway engineers; in the case of a large project and a sophisticated highway agency, the location team might consist of a 50-man multi-disciplinary team of professionals ranging from anthropologists to hydraulic engineers. Most location teams, of course, fall somewhere between these two extremes.

²The course of action can consist of choosing to implement an actual design alternative or it can consist of choosing to implement a meta-process to determine how to make the choice among design alternatives.

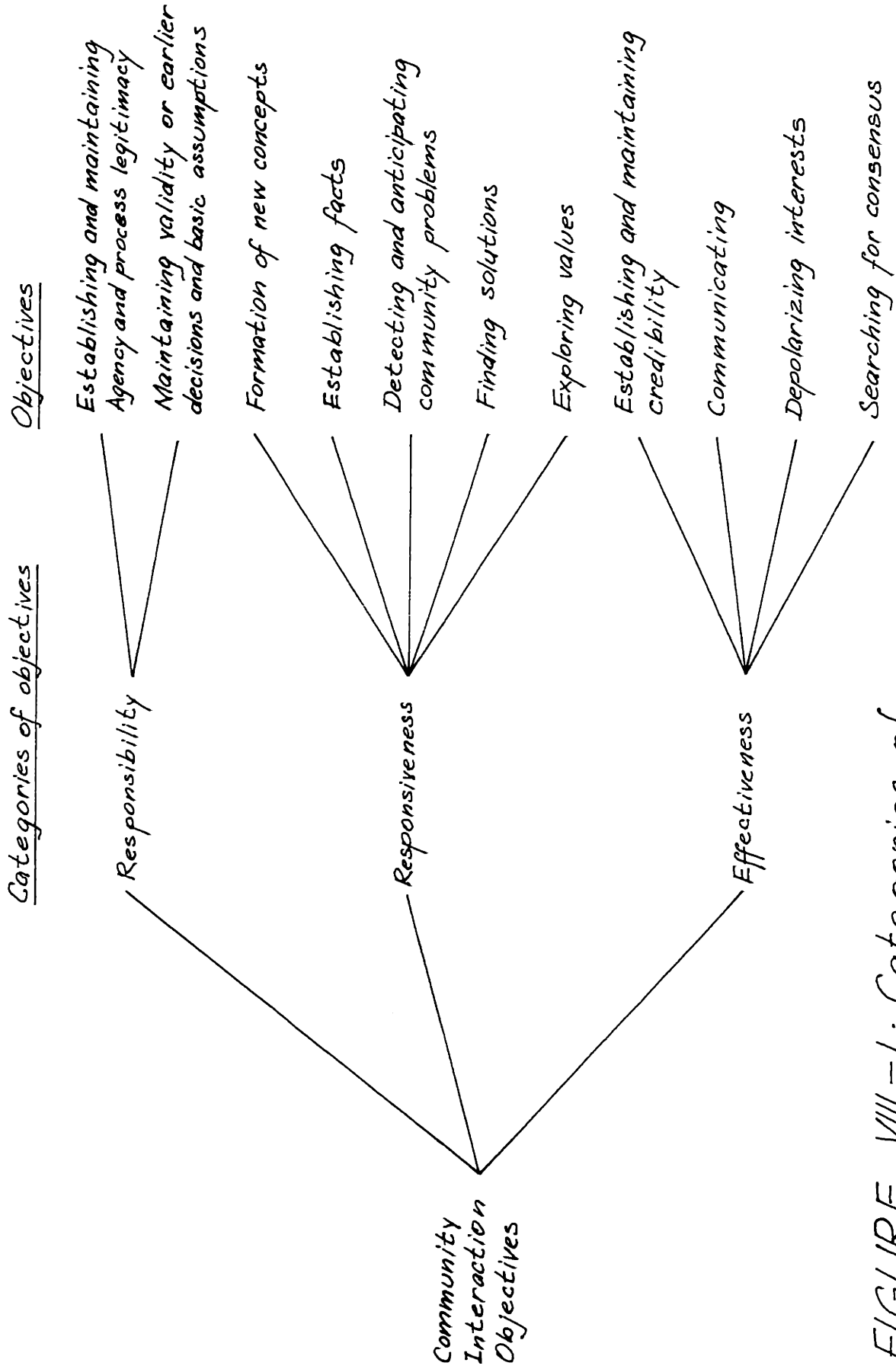


FIGURE VIII -1: Categories of Community Interaction Objectives

It can do this by addressing itself to the groups of problems which, in Chapter VII, were referred to as the crisis of confidence and the crisis of solutions. The cases suggest a number of fairly specific community interaction objectives which, if pursued, can serve to make inroads on these crises.

A wide variety of community interaction techniques are available; decisions must be made initially and throughout the process as to which techniques to use, when to use them, and how to apply them. To assist in making these decisions the objectives of community interaction must be clearly defined, and a program of community interaction activities must be structured to achieve the defined objectives.

Once objectives of community interaction are identified for a particular location-design project, a program of activities made up of selected interaction techniques, can be designed. Making choices about which of the techniques to apply at a given time and at what scale of effort to apply them depends on the immediate needs and on the resources available; it is a continuous management task.

Eleven different needs which may be facilitated by interaction between the highway agency and the community have been identified. Corresponding to these needs are eleven community interaction objectives falling into three broad categories: a) responsibility, b) responsiveness, c) effectiveness (Figure VIII-1).

VIII.B.1 Meta-Process Objectives: Community Interaction Objectives for a Responsible Agency and a Fair Process

The first set of objectives are part of the meta-process. Because the meta-process is a necessary but not sufficient element of the decision-making process,³ these objectives cannot be turned on and off; the highway agency, like any public agency, must always be responsible to the public and must account for its actions to the public.

The "public" is the generalized concept of "community", because the full range of actions or non-actions affected by an agency over a period of years affects virtually all individuals, groups, and institutions.

It is essential that not only the highway engineer but also the lay citizen know and accept what the agency's responsibilities are. In the absence of this understanding, an agency cannot effectively meet the responsibilities in question. Even if the agency is accountable administratively to some power other than the community at large, what matters is the public's perception of how well the agency is pursuing the community's interest. This suggests that not only must a decision-making process be responsible to the public, but the process must also be perceived by the public to be responsible.

General consensus on agency and process responsibility is critical. The premise that a state highway agency simply is implementing the highways which the public, through its elected representatives, has decided to build has evaporated in the last few years (see Chapters XI, XII, XIII, and XIV). Increasingly, highway agencies are viewed by many segments of the public as being more responsive to the needs of a special interest group than to the needs of the broader public. Obviously this is

³See Chapter VI.

tantamount to declaring the highway agency a special interest not responsible to the public as a whole.

This crisis of confidence seriously undermines an agency's ability to carry out its responsibilities.⁴ Any public agency which is not perceived by the public as being responsible to the public is burdened with an almost insurmountable handicap. Regardless of the reasons for this loss of legitimacy, the highway agency has to address the reality of this loss if it is to become more effective in carrying out its charge.

Objective: Establishing and Maintaining Agency and Process Legitimacy

Agency and process legitimacy is this sought-after quality of being perceived by the community at large as meeting the intent and letter of the relevant statutory and administrative mandate, and of having the mandate itself being accepted as correct.

Where loss of confidence is detected, establishing and maintaining legitimacy must be adopted as the primary objective for an agency; legitimacy is not unlike an individual's reputation, it is a precious thing which is hard to earn but easy to lose.

A three part strategy of spartan simplicity is suggested:

- 1) Make the agency's responsibilities, authorities, programs, processes, operating procedures, and constraints known.

⁴This position is, of course, not unique to highway agencies; other public and quasi-public agencies have been experiencing this same crisis of confidence, e.g., agencies responsible for urban renewal, power projects, flood control projects, etc. In fact any agency which can be readily identified with the established way of doing things is often referred to as a member of the "Establishment", and this has come to be a derogatory term.

- 2) Operate scrupulously within the intent and the letter of these.
- 3) Make this fact known.

The public is generally ignorant of the highway agency's responsibilities and authorities as well as of the location-design process being followed. This is the case not only for the man on the street but even for local officials, other public agencies, and members of the public press. A major reason for the loss of legitimacy of many agencies today is the generally prevailing ignorance of the agency's role; this ignorance sets the stage for rumors, misunderstandings, and misrepresentation, all of which are fertile ground for suspicion and mutual distrust. A task of which an agency should never tire is to put before the public, and to keep before the public, the agency's responsibilities, authorities, programs, processes, operating procedures, and constraints.

Objective: Maintain Validity of Earlier Decisions

Decisions such as transportation network design and timing, and the reasons for these decisions, have to be kept available to the public. Should conditions change sufficiently to warrant a reconsideration of some of these larger and earlier decisions, the agency should take the initiative to raise the issue rather than waiting for the public to do it. The public, however, should have a realistic sense of both the feasibility and the consequences of changing these decisions. This "sense" has to be achieved through a frank sharing of the professionals' evolving view of earlier decisions. If the agency finds earlier decisions still valid, it must share its reasons with the public rather than simply ask the public to accept the decisions on faith.

VIII.B.2 Augmentation Objectives: Community Interaction Objectives
for Responsive Solutions

If community agreement on a course of action which is feasible, equitable, and desirable is to be achieved, each of the various participants must see something desirable in the contemplated course of action. That is, developed solutions should respond directly to the needs of the various individuals, groups, and institutions which are potentially impacted. While the first category of Community Interaction Objectives dealt with the "crisis of confidence" in the agency and its processes, the objectives in this category address a perceived "crisis of solutions".

An increasing number of lay observers, as well as many highway professionals, perceive a rather unsatisfactory response to the problem of designing urban highways by the typical solutions to this problem. There are essentially two contributing factors to this poor response:

- 1) People do not share the same values and therefore do not perceive the same problems. More specifically, highway professionals and laymen far too often perceive different phenomena when they appear to be looking at the same thing.
- 2) Any massive construction project in the urban setting is bound to be very disruptive and the highway agency, as well as any other single institution, is ill-prepared to deal with the many problems which result from this disruption.

Five separate needs which will help to make a location team more responsive have been identified. Each of these needs can be met in part, or in toto, by an appropriate mix of community interaction techniques.

Objective: Formation of New Concepts

Trying to solve the wrong problem is not likely to lead to a satisfactory solution. To some degree this is precisely what happens if strong perceptions of highway effects are carried into a community which has not been studied.⁵ A conscious, overt effort has to be made to penetrate through any possibly existing preconceptions about the community in question. When this can be done, there is a reasonable chance to anticipate what impacts the highway really will have on the community, and a fighting chance to do something about those impacts before they actually happen.

A number of techniques and professions, such as anthropology, can be employed to help a highway agency formulate concepts about a community which will assist the agency in responding to highway impact related problems in that community.

Formulation of concepts is essentially inventing new, but useful, ways of seeing and defining a problem. For example, one agency considered providing relocation housing to displaced families in the form of high-rise housing to be built in the air-rights. The agency abandoned the idea when they learned that high-rise housing would be unsatisfactory for the displaced families. Though poor, they were now living in low density one and two-floor houses. Replacement housing had to incorporate the concepts of single-family homes and adequate open space to be acceptable

⁵i.e., Carrying the rationale which was used for aligning and designing suburban expressways into the core city is one example of this. Applying middle-class values in evaluating solutions in a not so middle-class community is another example, and it is something the typical (middle-class) highway professional frequently does.

to the relocatees.⁶ The agency learned that the concept of providing replacement housing had to be broadened to include the idea that such housing has to conform to the living-style requirements of those to be relocated.

Objective: Establishing Facts

While concepts are formulated, facts are simply gathered. The important thing is to establish beforehand which facts are to be gathered, for what purposes, and to be aware of the possible dangers of fact-gathering.

Facts and concepts are significantly different phenomena. A fact is 100% operational; it can be settled to everyone's satisfaction beyond dispute. A concept is essentially a "way of seeing things", a hypothesis that may be supported by either a line of reasoning or by facts but whose existence or validity can not be proven once and for all.

Separating facts and concepts may not be easy. The highway case studies which have been examined suggest that failure to distinguish between the two phenomena fuels the fires of controversy by creating misunderstandings and cynicism on the part of both the public and the highway agency. It must be carefully resolved which facts can settle which issues, and this must be done not only to the highway professionals' satisfaction but also to the satisfaction of those laymen who have their own concepts of problems and possible solutions.

For example, when one agency wanted to determine the stability of a particular neighborhood, it decided that the necessary facts could be ob-

⁶Hill, Stuart, "Century Freeway - Watts", in JOINT DEVELOPMENT AND MULTIPLE USE OF TRANSPORTATION RIGHTS-OF-WAY, Special Report 104, Washington, D.C.:

tained through a survey of the area to determine the percentage of people who lived there five years or less. About 30% of the residents fit this category and the agency concluded that the neighborhood was relatively unstable.

A social scientist who was doing field work in the same neighborhood, however, felt that the concept of neighborhood stability as determined by a percentage of people who were transients was inadequate. From his more intimate, but completely nonquantitative, knowledge of the neighborhood, he was of the opinion that the concept of a very stable neighborhood was more characteristic of the area. He then secured and analyzed data on the entire distribution of length of residency. It turned out that there was a bi-modal distribution with about 30% of the residents living there for five years or less and another 30% living there for twenty years or more.⁷

The question which needs to be answered in this case is: what useful concepts does the bi-modal distribution suggest? When considering the possible difficulties of relocating people, the 30% long-time residents are significant because they may prove to be very immobile. But, when trying to predict how the neighborhood may change in the years between route adoption and construction, the fact that the 30% of short-term residents are largely students would become very important.

Highway Research Board.

⁷Fellman, Gordon, IMPLICATIONS FOR PLANNING POLICY OF NEIGHBORHOODS' RESISTANCE TO PROPOSED HOUSING AND HIGHWAYS, Research report under Urban Planning Research and Demonstration Project Grant Mass.PD-5, U.S. Department of Housing and Urban Development, July 1968.

Objective: Detecting and Anticipating Community Problems

Community interaction should bring all basic community problems to the highway planner's attention. While such an effort does not necessarily imply that it is the planner's responsibility to solve these problems, the added knowledge will permit better decisions and, in some instances, will also permit solution of some of the community's problems.

Highway professionals often tend to discount the way laymen perceive a problem and conversely, laymen tend to discount the problem perceptions of the professionals. Neither the professionals nor the laymen have a monopoly on having lucid insights or on wearing blinders occasionally.

Objective: Finding Solutions

The community not only holds a store of its own problems with which it tends to burden the highway designer, it also may hold the key to potential solutions to the highway and related impact problems. While the highway engineer cannot rely on finding a solution via this method, he can ill afford not to put good ideas to use if they are available.

Obtaining good suggestions of solutions from the community, however, is easier said than done. Usually, solutions proposed by laymen are not completely worked out, are put forward rather late in the process and often in the midst of controversy, and are generally communicated in such a manner that the professionals reject them out-of-hand. A suggestion may be buried in the "letters to the editor" section of the newspaper; it may come from an individual with whom the highway agency personnel has had an altercation, or it may be part of a proposed scheme which is - with the exception of the idea in question - completely in-

feasible. Some very good constructive ideas, as a result, manage to go unrecognized.

While community interaction should not be expected to be the prime vehicle for producing alternative solutions, it can enlarge the set of alternatives by producing ideas about possible ways of augmenting already developed alternatives which could meet particular problems. Needless to say, an augmented alternative may get an entirely different response from the public than did the original one, particularly if the change is in direct response to some community problem. Of equal importance, the process of developing and evaluating proposed solutions will assist a community in achieving an improved understanding of complex and interrelated community problems.

Objective: Exploring Values

Community values are, of course, an important part of what a location team is after. But, as has been discussed (see Chapters I, II, III, and IV), community values cannot now be dealt with in the same manner as such items as accessibility or cost. People do not spend their time articulating values, and even if they did, past experience indicates that the articulated values may not represent actual values. If, for example, a community or an individual claims to place a very high value on impact A but chooses not to implement any of the available means of enhancing A, statements about concern over A should be taken with a grain of salt.

Even if articulated values can't be relied on, there may be ways to help a community determine its actual values. For example, alternatives embodying quite different but reasonable values can be developed to help

a community, as well as the location team, obtain an understanding of the implications of a range of values. The public's reaction to the various ramifications of different values should be noted before any of their value statements are taken too seriously. Value explorations can thus serve as an honesty check.

VIII.B.3 Community Interaction Objectives for an Effective Process

The two categories of objectives, responsibility and responsiveness, embody the strategy for building a constructive interface between the highway agency and the community. The third category of objectives enhances the likelihood of success in carrying out the agency's responsibilities and in responding to the community's values and can best be thought of as "effectiveness" objectives.

Objective: Establishing and Maintaining Credibility

Credibility is not to be confused with legitimacy. Legitimacy concerns the community's perception about how well the agency conforms to the statutory and administrative procedures, as well as the community's belief in these procedures. Credibility describes the community's perception of the reliability of the agency's word.

It is to no one's advantage when communication between communities and the highway agency breaks down because these communities do not believe what the agency is saying.⁸ When the public is skeptical about

⁸When, for example, a highway agency is believed to gather data in order to justify its policies rather than to determine its policy, that agency's reports about a highways' impacts, etc., have little credibility.

accepting the highway agency's word, every communication from the highway agency, no matter how well intended, may be interpreted to have some malicious meaning.

If the agency's communication is to be effective, its word has to be credible. This is best achieved if an outright effort is made to establish and maintain the highway agency as the most reliable source of information relative to highway issues. The agency cannot be secretive; it must interact with the community in a manner which gets all relevant information to the potentially affected people be that information favorable or unfavorable.

Objective: Communicating

The construction of a major urban highway may affect literally thousands of individuals, groups, and institutions. Most highway agencies are currently unprepared to carry on a communications effort of the necessary order of magnitude to achieve meaningful communication between these people and the agency. Worse, at the very moment when communications become crucial, i.e., when a project becomes controversial, many agencies close up channels of communication as a matter of policy. After all, they say, the communication just contains opposition and abuse and is not constructive.

There is no reason to believe that controversy, opposition, and abuse will go away simply by opening up channels of communication, but establishing and maintaining communication is a necessary first step in resolving conflict; reliable information must be effectively communicated between the agency and the public. Even under very favorable circumstances,

such as exists between two parties who have no controversy between them, good, undistorted communication is difficult. Highways are presently a very controversial business requiring the communication of difficult and ill-understood concepts. It is imperative that all feasible channels of communication be used effectively.

Objective: Depolarizing Interests

Many observers of, and participants in, the highway revolt have the impression that there are only two possible positions: that an interest has to be either for or against the highway, that what is good for one party is necessarily bad for another party; i.e., that building an urban highway constitutes a zero-sum game between two interests. This perception of the problem leads automatically to a polarization of positions.

The "for or against" attitude is an unfortunate oversimplification; the urban highway problem does not need to be a tug of war between interests for the highway and interests against the highway. Schelling shows that true zero-sum game relationships are extremely hard to come by.⁹ (See Chapter IV.) Typically, not even war constitutes such a polarized relationship, and highway controversies never qualify.

The effects of a polarized relationship are harmful to all parties involved since communication is cut off when the other party is vilified.¹⁰

⁹Thomas C. Schelling, THE STRATEGY OF CONFLICT, New York: Oxford University Press, 1963; and other works on Game Theory.

¹⁰This is one of the characteristics of truly polarized relationships. Participants have absolutely nothing to gain from sending or receiving any communication to or from the other party - except for the express purpose of deceiving the other. Deception is only attempted if each one believes the other is less intelligent than himself, i.e., that he can

The very thing which is needed most, a cooperative search for a mutually acceptable solution, is abandoned because each party feels the other party is not sincere and is trying to "put something over". In addition, the conflict syndrome results in a breakdown of the communications channels, distrust between highway agency and public, real or imagined attempts at deception, all tending to drive the participants into polarized positions and the concomitant perception of a tug of war between "for" and "against" interests.

Polarization depends very much on misconceptions. We therefore have to look for, and make use of, those values and areas of concern where there is an overlap or sharing of interests. This means a close relation with the objective of using community interaction as a means of searching for new solutions, or for looking into ways of changing the existing solutions so that more actors prefer the resulting solution.

Objective: Searching for Consensus

Developments over the last several years demonstrate that a proposed public action requires broad public support if it is to be implementable. While not every interest will support an alternative, there needs to be substantial effective agreement on the action's desirability.

Consequently one objective of the process is that none of the groups who could prevent implementation be opposed to the contemplated course of action. This sounds like a tall order because it seems that today almost any group can stop a large public project. Still, it is a statement of

fool the other. For a discussion of deception see "Poker and Bluffing" in John Von Neumann and Oskar Morgenstern: THEORY OF GAMES AND ECONOMIC BEHAVIOR, op. cit.

the obvious; if an alternative is to be implemented, all those who could potentially stop it have to be in favor of it.

It is important to remember that individuals base their actions not necessarily on what is, but on what they perceive. Consequently, if the location team develops an alternative which they believe solves all of the problems, it is essential that the public perceive the same thing. It is useless for the professional to have designed a "good" alternative if the general public does not also agree that the alternative is a "good" one.

VIII.C. Summary

When we apply the concepts of augmentation and meta-process to highway location-design, a general opening up of the process to the lay interests suggests itself as the key factor in making the decisions more responsive to the individual actors' needs and more responsible to the public at large. This desired general opening-up of the process can be brought about by paying much more attention to the interface between the highway agency and the public; what is needed is an approach which recognizes that a great deal of information about individual values, knowledge about available options, and understanding of cultural values has to pass in both directions through this interface.

While one could also write an instructive manual for the lay actor, so he could interact more constructively with the location team, we have chosen to advise only the public agency, i.e. the location team, how it should change current practice to make more responsive and responsible decisions.

Community interaction includes:

- 1) all of the ways by which the location team learns about the community,
- 2) all of the ways by which the community learns about the location team and about the location-design process, and
- 3) all of the ways by which the location team and the community work together to achieve agreement.

A rigorous program of community interaction has the potential of making the highway location-design process more consistent with the decision-process criteria developed in Chapter II. In fact, we can develop a number of operational community interaction objectives by examining the various problems that were discussed as contributing to the crises of confidence, solutions, and effectiveness.¹¹

¹¹See Chapter VII for a discussion of the three crises.

CHAPTER IX

A PROGRAM OF COMMUNITY INTERACTION

IX.A. Design of a Community Interaction Program

IX.B. Community Interaction Techniques

IX.B.1 Techniques which lend themselves for use throughout
the location-design process

IX.B.2 Techniques which lend themselves for use in one phase
or another of the location-design process

IX.B.3 Techniques which lend themselves for the achievement
of some specific purposes

IX.C. Non-Techniques

IX.D. Community Interaction Management

IX.E. Summary

ABSTRACT

The community interaction objectives can be pursued by having the location team make use of a number of community interaction techniques. The location team needs to select those techniques from the many - about 40 - catalogued techniques which suit the particular needs of the problem best.

To make this selection, the team needs to consider the context of the problem, the current and the imminent phases of the location-design process, and the community interaction resources that they can call on. Community interaction is not an activity that can - or should - be carried out divorced from the other location-design activities: development of alternatives, impact prediction, evaluation, and location team management. The team manages the community interaction program continuously by planning, scheduling, and staffing specific techniques addressed to accomplishing specific community interaction objectives.

Notifying local authorities, holding public hearings, making press releases, and taking surveys are some of the methods -- or techniques -- of community interaction which highway agencies traditionally have used. Though community interaction techniques are important tools for the location team, most highway agencies have very limited instructional material or research findings available to help them get the most out of their community interaction activities, particularly with respect to incorporating community and environmental values into all aspects of the process. Some techniques have never been researched;¹ others have, but frequently the research was done in some field other than highway decision-making and therefore has not necessarily come to the highway professionals' attention.

In section B of this chapter we list about forty different techniques which a highway agency might avail itself of. Appendix 2 consists of a Community Interaction Catalogue, where these techniques are discussed in slightly more detail than in this chapter.

Additional techniques can be identified or invented, and the cata-

¹Some techniques have been getting close scrutiny in recent times and will undoubtedly become more useful tools if the research findings are applied. For example, Ellis Walton of the Virginia Highway Research Council and Jerome Sanoff, of the University of Virginia examined the public hearing process of the Virginia Department of Highways and made a number of recommendations for improving the process.

L. Ellis Walton, Jr., Virginia Highway Research Council; and Jerome R. Sanoff, University of Virginia, "A Strategy for Highway Hearings"; paper presented at the 50th Annual Highway Research Board Meeting, Washington, D.C., 1971.

Also, the State of Illinois has examined its public hearing process as reported by Baumann, W. E., "Hearing Procedures in Illinois", Annual Meeting of the American Association of State Highway Officials, Houston, Texas, 1970.

logue is intended to represent a start that can continue to grow.² But even with just the list of techniques catalogued, it is obvious that no single agency could use all of the community interaction techniques on any given project -- nor would it want to. Each location team will want to choose and pick from the many techniques. It will put together its own community interaction program, suited to its particular needs and resources. This community interaction program usually will consist of the careful, coordinated use of just a few techniques.

Designing a program of community interaction means to marshal the community interaction resources in such a way that the community interaction objectives (See Chapter VIII) which are relevant at the point in time can be realized.

One set of these resources are the potentially available community interaction techniques. Funds, time, and manpower -- even good will -- are some of the other resources.

IX.A Design of a Community Interaction Program

How should the location team go about picking and choosing techniques? What specific interaction techniques should be used in a given

²Our listing is neither comprehensive nor are the techniques mutually exclusive. It is only a "first cut" at this task of finding and refining possible tools for community interaction; we are confident that extended efforts in this area over the next several years will bring two kinds of pay-off:

- 1.) Making the catalogue more exhaustive by searching in all relevant fields of interaction between different social entities.
- 2.) Making the catalogue more comprehensive by getting much more deeply into each technique, modifying and refining techniques as necessary to make them more directly usable by the typical highway agency.

context? When in the process should a particular interaction technique be employed? What techniques should be used with individual interest groups? What particular process objectives can be accomplished with community interaction techniques? How does one develop and manage a program of community interaction? These are questions of foremost concern in designing a program of community interaction activities.

Designing a community interaction program consists of six steps which lead the location team from general community interaction objectives via progressively more operational steps to the description of specific work assignments. But having gone through this six-step process of designing a community interaction program is not the end; the location team will change, adjust, and redirect its community interaction activities periodically throughout the process. As the needs change, the location team should review the current program by cycling through the six steps again.

The six steps of developing a community interaction program follow a basic work program:³ 1) Review specific objectives, 2) Assess needs, 3) Review available resources, 4) Select or alter community interaction tasks, 5) Final review and coordination with other location team activities, and 6) Personnel assignments and setting of work schedules.⁴

As the first of these steps the location team establishes -- or, after it has done this once, it reviews -- specific community interaction objectives. The location team establishes in this review just what con-

³See Marvin Manheim et al, Community Values in Highway Location and Design: A Procedural Guide, (Cambridge, Mass.: M.I.T. Urban Systems Laboratory Report No. 71-4, 1971), Chapter III.

⁴See Figure IX-1 in section D of this chapter.

tributions the community interaction program can make to the overall location-design process; i.e., the location team spells out its community interaction objectives. This is like the setting of any planning objectives.⁵

For example, say the location-design process has progressed to the point where the number of alternatives has been reduced to a small number, all of which are considered by all participants to be better than the status quo alternative. The location team might, in this case, decide that one objective of community interaction activities in the immediate future should be "to get a consensus" among all participants on one of the alternatives.

As a second step in the development of a community interaction program, the location team has to decide precisely how much of the community interaction objective in question they have to achieve; they have to assess the specific needs relative to the community interaction objective. In the example above with the community interaction objective of getting a consensus on one of several alternatives, the task would consist of determining how much of an agreement is needed. 100%? Or, would something less also be acceptable? If so, what kind of disagreement is acceptable? Also, how much of an effort, and what kind of efforts, need be made before justifying settling for something less than full agreement? What is the minimum kind of agreement needed to proceed? And more specifically, which participants must agree on the choice of an alternative?

⁵Objectives which are appropriate for community interaction were discussed in Chapter VIII.

Having defined one or more likely specific community interaction objectives, the location team next takes stock of the resources it has at its disposal to accomplish the objectives. Time, funds, and the availability of interaction skills are the basic elements that make up these resources. As part of the review of community interaction resources, the location team should assess how difficult it would be to get more resources put at its disposal.

Community interaction resources cannot be reviewed entirely independent of the next step, which is a review of the tools, i.e. a review of the community interaction techniques that it might employ and the tasks to which it might apply them. Most likely the team is already carrying out several community interaction activities and therefore will want to know first whether it makes sense to continue those tasks, shift emphases among them, or to think of discontinuing them and initiating new ones. Different techniques require different skills and different amounts of time. Techniques also differ widely in their potential, i.e. in what they can accomplish for the location team. Selecting community interaction techniques to make up a package of executable community interaction activities requires finding a combination of available skills, time, funds, and feasible techniques which have the potential of accomplishing the team's community interaction objectives.

After one preliminary run through the step of selecting community interaction techniques, it is essential to compare the kind of time schedule which is implied by the proposed program of community interaction tasks with the time schedule(s), or constraints, being antici-

pated by the other location team activities.⁶ If, for example, the location team considers constructing a prototype of a new kind of replacement housing system to demonstrate to the community what such housing would really be like, then the minimum time required for executing this demonstration project becomes a criteria for revising the schedule for carrying out the other location team activities.

Once the location team feels that it has a set of community interaction tasks which is consistent with its objectives and meets the current assessment of needs, and is consistent with available resources and work programs for the other location team activities, then it can take the final step of making specific personnel assignments for carrying out the community interaction tasks according to a specific work schedule. This schedule, while operational, is subject to periodic review and possible revision.

IX.B. Community Interaction Techniques

Each of the various ways an agency can interact with individuals, groups, or institutions - i.e. with any lay actor in the community - is a potential tool for achieving the determined objectives of community interaction. Some 39 different techniques, or ways of interacting with a community have been identified. This is not intended as an exhaustive list and no agency needs to use, nor would it want to use, this many techniques on any given project. Rather, a package of techniques would be selected, based on an assessment of current needs, the relative poten-

⁶See Marvin Manheim et al., Community Values in Highway Location and Design: A Procedural Guide, (Cambridge, Mass.: M.I.T. Urban Systems Laboratory Report No. 71-4, 1971), Chapter II, section C.

tial of each technique to accomplish a need, and the available resources for carrying them out. Most likely, the selection of a particular package of techniques would be continually modified over the duration of the study, with some techniques being added and others deleted.⁷

Because community interaction activities are defined to include all interaction between the public and the location team, the community interaction techniques cover a very broad spectrum of activities. In fact we have attached the label "community interaction technique" to some activities which do not involve any segment of the public at all;⁸ they are, however, activities which affect the relationship between the location team and the public, even though they are carried out entirely within the highway agency.

The techniques do not fit into any rigorous taxonomy of interaction activities; rather, they fit into three groups of "ways of accomplishing interaction objectives": one group of techniques which lend themselves to application throughout the location-design process, one group of techniques which are best used during one or another phase of the process, and a third group of techniques which can be used to achieve some specific purpose and would only be used when such a purpose presents itself. Some techniques fit the common definition of a technique in that they consist of a list of specific how-to-do-it instructions; others are much more generalized approaches which offer not much more than a basic principle and rely on the location team's ingenuity to adapt its activities

⁷See section D of this chapter.

⁸CITs #4, 6, 21, 25, 34, 35, 36, 37, and 39.

to take advantage of the principle(s) in question.

One characteristic of our classification of techniques is that some of them are for use at the highest level of policy-making in the highway agency; others lend themselves to be used by the administrator with management responsibilities within the location team, and still others have something to offer for the location team members assigned to carry out specific tasks of the location-design process.

While the list of techniques is reasonably comprehensive, it should nevertheless be viewed as nothing more than a good start on a more complete listing. There is no question that many useful ways of interacting are not included and will be discovered if research of this kind continues. The techniques have evolved from essentially three sources:

- 1) Some techniques were literally invented by translating a particular community interaction objective into operational recommendations for location team activities.
- 2) Some techniques are listed because they are currently being used by location teams.
- 3) Some techniques are listed because they have been used successfully in non-highway contexts which are sufficiently similar to the highway milieu that they merit examination and possible application in highway problems.

Each technique is described in the following pages so that the basic principles which form the technique's foundation can be understood. This is sufficient information for many potential users to develop their own operational techniques for use on an actual project. Appendix 2 contains a somewhat more detailed description of each technique in terms of:

- key features of the technique, i.e., how the technique is carried out;
- basic principle(s) of the technique, similar to what is given in this chapter;
- some important basic variations of the technique;
- an example application of some of the techniques;
- advantages and disadvantages inherent in the technique;
- some possible highway applications of the technique;
- references to additional, and more rigorous material directly relevant to some of the techniques.

IX.B.1 Techniques which Lend Themselves for Use throughout the Location-Design Process

Twelve community interaction techniques (CITs) lend themselves to application throughout the location-design process.

CIT 1: Establishing an Overall Process Agenda and Operating Within It

The location team's objective of achieving general public agreement on a course of action can be frustrated in one of two ways: 1) the various interests may fail to reach agreement on one design option, i.e., they may fail to make a choice among the alternative courses of action, or 2) the various interests may fail to agree on the process by which the choice among alternatives is made.

CIT 1 focuses on this latter potential problem by making sure that the affected interests generally agree that there is nothing inherent in the location-design process being used which will preclude reaching consensus on an alternative solution, once alternative solutions have been

Establish & maintain agency legitimacy	X	X		X	X						X	X
Maintain validity of earlier decisions	X					X	X	X			X	
Form new concepts			X			X				X	X	
Establish facts				X								
Detect & anticipate community problems			X		X		X	X			X	
Find solutions			X					X		X	X	
Explore values			X							X	X	
Establish & maintain credibility	X			X	X				X		X	
Communicate		X			X	X	X	X	X	X	X	
Depolarize interests					X		X				X	
Search for consensus					X					X	X	X
<i>Community Interaction Objectives</i>												
<i>Community Interaction Techniques</i>												
<i>Establishing an overall process agenda and operating within it</i>												
<i>Educating the public about the decision-making process</i>												
<i>Monitoring new developments affecting one or more of the relevant urban systems</i>												
<i>Monitoring actual impacts of recently-built highways</i>												
<i>Ombudsman</i>												
<i>Encouraging internal communication</i>												
<i>Establishing and maintaining contact with all actors and issues</i>												
<i>Monitoring the mass media</i>												
<i>Producing and releasing material for the mass media</i>												
<i>Dealing with the public in the highway agency offices</i>												
<i>Listening for the public's suggestions for alternative solutions</i>												
<i>Holding and attending meetings: Working meetings</i>												
<i>Holding and attending meetings: Public hearings</i>												

FIGURE IX-1: Community Interaction Techniques which lend themselves for use throughout the location-design process

developed and augmented.

CIT 2: Educating the Public About the Decision-Making Process

Constructive interaction between the public and the location team is impossible if the various lay interests, i.e., individuals, groups, and institutions, who want to - and/or need to - make an input do not know how the location-design process works.

CIT 3: Monitoring New Developments Affecting One or More of the Relevant Urban Systems

Highways are part of a transportation system; rapid transit and other forms of public transportation are another part of that system. Besides other parts of the transportation system, highways also affect - and sometimes are affected by - other urban systems, such as the housing market, the mortgage market, and the economy as it relates to local employment, local industry, and local business. When one of these systems undergoes change, or can be anticipated to undergo change - e.g., the effects of a change in the mortgage market on the general availability of housing - it is desirable that this fact be brought to bear on all relevant decisions. Most of these anticipated changes should affect agency-wide policy.

CIT 4: Monitoring Actual Impacts of Recently-Built Highways

Predicting a highway's impacts on the individual and the community's cultural values is a tall order; the location team has few if any tried and true methods available.

This technique wants to make the most of the fact that, by the time a highway alignment and design has been agreed on by the various interests, the location team has learned a lot about the affected interests'

values. If it is not only predicted what kind of impacts the highway might have, but, if after the road has been built, the contact with many of the interests is maintained to find out what impacts the road really did have, then the team's ability to predict can be expected to improve over time.

CIT 5: Ombudsman

It has to be expected that the location team and the highway agency - just like any large bureaucracy - will from time to time have complaints lodged against it by some affected interest even if it tries to be responsive and responsible. Where can the aggrieved lodge his complaint? Unless there is an ombudsman - or some other mechanism which fulfills the same function - he has only three options: 1) appeal to the highway agency itself, i.e., to the agency against whom the complaint is lodged; 2) appeal to the state and/or federal government to intercede; 3) take the matter to court. All of these are unsatisfactory because they make mostly for a lot of conflict and controversy rather than making for the correcting of any possible wrong.

The ombudsman, as he is known in Scandinavian government, is there to investigate complaints by individuals or groups. In recognition of the fact that it is very difficult for an individual or a group to address a bureaucracy, he is made accessible to all. He has no executive powers but tries to right a wrong rather than to fix blame. If he does perceive systematic wrong-doing, he may expose the matter in the public press.

CIT 6: Encouraging Internal Communication

Good, creative ideas about a problem do not come only to the personnel directly involved in its solution, i.e. to professionals; in fact,

people who are a little removed from the problem may have an advantageous perspective. In order to put to use good ideas from within the highway agency which happen to surface at the wrong place, good communication within the agency has to be encouraged.

CIT 7: Establishing and Maintaining Contact with all Actors and Issues

This technique aims to open two-way channels of communication between the location team and each of the various individuals, groups, and institutions that may be affected by the highway, and it attempts to keep these channels open once they have been established.

CIT 8: Monitoring the Mass Media

The community consists of many interests who have values of their own. These interests cannot be expected to be unified on issues which are relevant to the location-design process. One good way of getting a reading on the various interests' perceptions is to monitor the communication between interests which takes place through the mass media.

One other role the mass media plays is that it is one of the channels by which the various interests communicate with the location team.

CIT 9: Producing and Releasing Material for the Mass Media

This technique is the counterpart to CIT 8; it deals with using the mass media as a channel for the location team's communicating with the public.

CIT 10: Dealing with the Public in the Highway Agency Offices⁹

Individuals, groups, institutions, even other governments, try to make contact with, or try to get information from, the location team.

⁹See also discussion under Non-Techniques, in section C of this chapter.

Some of these efforts are made by phone, some in writing, and some people try to achieve their purpose by visiting a highway agency office. More often than not, the right contact is made only after some delay; in some cases, the right connection is never made.

This technique attempts to establish procedures and mechanisms to facilitate getting inquiries taken care of without frustrating the person making the inquiry and without delay or the expenditure of undue effort by the location team. The technique also recognizes the importance of having the location team learn about the community's problems and needs.

CIT 11: Listening for the Public's Suggestions for Alternative Solutions

This technique is based on the recognition that some of the ideas which get kicked around by the various affected local interests may hold the key to finding solutions to some of the highway problems. Good ideas may be difficult to spot because they often are buried among some entirely infeasible suggestions, or they may come from some group which has antagonized members of the location team, or they may be put forth too early or too late in the process. Unless the location team makes a conscious effort to capture every useful suggestion out of all the comments which surface at one time or another, many ideas which could contribute to the development of successful solutions are lost to the location team.

CIT 12: Holding and Attending Meetings; Public Hearings

12A: Working Meetings

Working meetings focus on an agenda of work which is to be accomplished. To prevent the participating interests from confronting each other at a meeting with demands and ultimatums, rather than work on a problem, the various interests should be represented by staff-level

personnel who are in sufficiently low positions not to make major concessions if demands were made.

12B: Public Hearings¹⁰

A public hearing constitutes the formal ratification of agreements which have been developed in working meetings. Ideally, no one attending a public hearing experiences any surprises; every presentation and every response to the presentation is anticipated. The only thing such a public hearing proves is that the public agreement worked out informally is, indeed, a public agreement.

IX.B.2 Techniques which Lend Themselves for Use in One Phase¹¹ or Another of the Location-Design Process

CIT 13: Field Work Method

The purpose of participant-observation fieldwork is to explore aspects of a given population's culture which may be anything from the belief system to the social structure, political processes, or the value system.

To summarize briefly, the main objectives of this approach are that the participant-observer must pay special attention to the range of individual manifestations expressed by the members of the given community. He must further be aware of the fact that the cultural values may not

¹⁰See also discussion under Non-Techniques, in section C of this chapter.

¹¹The phases of the location-design process which are referred to here are the four phases (1. initial survey, 2. issue analysis, 3. design and negotiation, and 4. ratification and monitoring) developed by Marvin Manheim.

See M.I.T. Urban Systems Laboratory Report No. 71-4, (Cambridge, Mass., 1971), particularly chapters II, III and VIII.

necessarily rest at the level of awareness of the persons who share them; they may in fact be subliminal. Values or other aspects of a culture may have to be inferred or interpreted by the researcher.

This type of fieldwork brings to light the cultural patterns, the way in which one way of life may be intertwined with another, the clusters of things that are meaningful to the people, and the significance which these domains have for these people.

CIT 14: Using Advisory Committees¹²

It has become increasingly common to utilize citizen advisory committees to advise decision-making in such areas as urban renewal, Model Cities, criminal justice planning, and more recently in highway planning.

Two assumptions are implicit in the concept: 1) the duly elected or appointed authorities are not fully representative of the public; and 2) a body which is selected for the express purpose of being representative of the public, i.e., citizen advisory committee, will be representative.

CIT 15: Hiring an Advocate for the Community¹³

One particular view of the relationship between the community and the highway agency leads to the conclusion that constructive interaction is most likely to result if the location team interacts with professionals who represent the interests of the community - rather than directly with the individuals, groups, and institutions which make up the community.

CIT 16: Operating a Field Office

Operating a field office is an expression of the spirit that it is

¹²See also discussion under Non-Techniques, in section C of this chapter.

¹³See also discussion under Non-Techniques, in section C of this chapter.

essential, though difficult, to reach all the affected interests - be it for the purpose of learning about their needs or be it for the purpose of having them learn about the location-design process, the alternative courses of action, and their respective consequences. A field office is physical evidence of the fact that a highway is being planned; it has the potential for serving as a communications link between the location team and some interests which might not be reached by any other means.

CIT 17: Analyzing Past and Current Plans Made by or for a Particular Community

Plans and programs developed by individuals, groups and institutions are an expression of their values and priorities. If the location team understands how those plans were developed and if it then analyzes the plans sensitively, it can learn not only about the substance of the plans but also about the values held by the interests who made the plans.

CIT 18: Reviewing Local Election Issues

This technique is a special case of CIT 17. Like local plans, local election issues tell a lot about local values. Election issues are not necessarily the same as the concerns otherwise expressed by the community. When combined with an analysis of local plans, reviewing election issues can tell the location team something about the kinds of issues that are prone to become controversial and which are not.

CIT 19: Conducting a Background Study

Background studies have to be prepared all the time; some require a few man-hours of work, others require thousands of man-hours, but the principle is the same: an issue arises and all relevant information has to be organized so that it sheds light on the issue and makes it possible

to make an informed decision about the issue. Obviously, the kind of decisions which have to be made determines the format of the background study.

CIT 20: Collecting Data, Carrying out Surveys, etc.¹⁴

Though data-collection is bound to constitute a major effort, it is strictly a means to an end. The end is always the same: some issue needs to be settled; the location team decides what kinds of facts could settle the issue and how those facts would best be collected. Then, and only then, is a survey - or whatever other method of data collection - chosen and designed.

Surveys are the most popular method. Most of them take advantage of the fact that when samples are chosen wisely - i.e., when the sample is "designed" properly - information about that sample can, with specific levels of confidence, be used to make statements about the entire population from which the samples were chosen.

CIT 21: Mapping Socio-Political and Environmental Data

Data which are typically only available in written or tabular form may, when placed on a map, suggest geographic patterns which cannot be discovered any other way.

CIT 22: Illustrating the Final Form of an Alternative in Laymen's Terms

Not all laymen can visualize from plans and drawings what a proposed alternative really will look like when it is implemented. This technique is a recognition of the problem and attempts to minimize any possible misconceptions on the part of the public about the alternatives in question

¹⁴See also discussion under Non-Techniques, in section C of this chapter.

by looking for all feasible methods of getting the message across.

CIT 23: Presenting the Public with a Range of Alternatives

The various interests which make up the community typically do not articulate their values and priorities. When they do, it remains an open question how valid such statements are. If, however, the location team can place before the community a whole range of concrete, feasible alternatives which gives them the opportunity to make actual choices, there is no question that their "real" values are brought to bear on these choices. Consequently, one reliable way of getting at an interest's values is to offer a choice among alternatives which incorporate different values.

IX.B.3 Techniques which lend Themselves for the Achievement of Some Specific Purposes

CIT 24: Initiating Necessary Legislation When Constraints are too Rigid

If the statutory constraints which are imposed on the location-design process and on the location team are so rigid as to make it impossible to develop alternatives which are feasible, equitable, and desirable, then the best course of action may very well be for the location team to turn its attention toward removing these constraints.

CIT 25: Sensitivity Training and the Laboratory Method

These techniques are used to make groups more effective. Groups study and try to change their own processes and the actions of group members to induce change in their individual behavior. In a highway agency the focus will usually be on improving professionals' responsiveness and organizational effectiveness.

CIT 26: Role-Playing

People may gain perspective if they learn to appreciate that other interests see a given situation quite differently because they operate under a different set of needs and constraints. In some situations - for instance in the case where different, but very compelling, forces act on individuals - role playing may be the most effective technique for giving people a feel for the pressures that may be operating on other interests.

CIT 27: Mediating Between Different Interests

The location team's ability to achieve general public agreement on a course of action may, at times, depend on how well two interests can iron out some conflict between them. When this is the case, the location team may want to contribute to resolving the conflict between the two interests in question.

CIT 28: Looking for, or Becoming, a Third Party in Negotiations Between Two Interests

This technique is a special case of CIT 27. If the resolution of a conflict between two interests requires a third party then the location team may want to take on that role or look for someone else who will. Say, for example, that interest A is negatively impacted to some moderate degree and that interest B is positively impacted to a greater degree by the same alternative. Say that A prevents agreement from being reached on the choice of the alternative in question and that B prevents agreement from being reached on any other alternative. If A and B cannot get together, a third party, C, may be able to collect some of the positive impacts on B and pass them on in one form or another to A.

CIT 29: Providing the Community With the Capability to Deal with Relevant
Non-Highway Problems

A location team can find itself in a position where, if it chooses, it can contribute to the solution of some local problem which has no direct bearing on the highway and which is not impacted by the highway per se. The technique assumes that the location team's preoccupation with the location-design process does not preclude its contribution to help solving other problems.

CIT 30: Carrying out a Demonstration Project

This technique is actually a special case of CIT 22. Say the location team feels that their objective of achieving community agreement would be substantially advanced if they could really demonstrate some key concept which the public - and maybe even the location team - has never seen implemented before. The team may then choose to design a demonstration project for the express purpose of resolving any doubt or ambiguity about what the concept would be like if it were to be implemented.

CIT 31: Conducting an Experiment¹⁵

An experiment has to be designed so as to be reproduceable; it is used to find out the effects of varying one or a few variables.

The location team may have a fairly good idea what the results of an experiment they undertake may be, but if they are sure of what the outcome will be, it is not an experiment.

¹⁵See also discussion under Non-Techniques, in section C of this chapter.

CIT 32: Charrette¹⁶

In the architectural profession, it has been traditional ever since the Ecole des Beaux Arts sent a charrette (cart) around Paris to collect its students' work when the submission deadline was reached to call crash efforts at designing as being "en charrette". (The hard-pressed students, rather than surrender their designs, used to jump on the cart along with their drawings so that they might work on them a few minutes longer "on the cart", i.e., "en charrette".) The concept of a charrette has been expanded to include using large segments of a community working in a short but highly intensive effort on the solution of a particular community problem.

CIT 33: Employing Community Residents on the Project¹⁷

This technique means employing people who are residents whom one would not hire if they were not residents. There are three possible reasons why a location team would want to do this:

- 1) Planning and construction of a highway constitutes a large public investment, a good deal of which is in wages; the location team may want to make sure that the local residents get some of the jobs.
- 2) The location team may wish that some skeptical local community interests would have some of their own trusted people working in the highway agency so that these interests would find out that the location-design process really is legitimate.

¹⁶See also discussion under Non-Techniques, in section C of this chapter.

¹⁷See also discussion under Non-Techniques, in section C of this chapter.

- 3) The location team may feel that if they had some people from the local community on their staff, the other location team members could learn a lot more about local interests and issues.

CIT 34: Previewing as a Check on Communication Effectiveness

The basis of this technique is the realization that it is easy to say something but that it is very difficult to get one's point across. A story has it that Napoleon kept a not-too-swift non-com around on whom he used to check the effectiveness of his own communication in the following manner: whenever he was about to send an order to his generals he would first have his non-com read the order and then tell, in his own words, how he interpreted the order. Only if it came out without distortion did Napoleon send the order; otherwise he rewrote it and tested it again.

CIT 35: Brain-Storming

Encouraging people to bring forth their ideas, no matter how tentative or "way out" they may be, is the chief purpose of this technique. There are essentially just two ways of making this happen: 1) Ideas are not subjected to any kind of criticism in order not to inhibit people from bringing out thoughts that they might think could be labelled as silly, and 2) the participants in a brain-storming session try to stimulate each other's thinking by picking up on each other's ideas and carrying them further.

CIT 36: Looking for Analogies

One way of latching onto new possible ways of dealing with a highway problem is to search for analogous problems in entirely different contexts. The criteria for determining whether an analogy is fitting or not

is the usefulness of looking at the problem in this new way, the light that the analogy is able to shed on the problem. For a person to make use of the technique, he has to: 1) have a good understanding of the problem at hand but not be so deeply immersed in it that he no longer is able to look at it in a new way, and 2) he must have intimate knowledge of some other field which can serve him as a source for analogies.

CIT 37: Cataloguing Design Concepts

Creating and organizing a catalogue of potentially useful concepts for the generation of alternative courses of action can be a very useful tool. With the help of such a catalogue, the location team can make sure that it does not overlook the already existing concepts. The catalogue is no substitute, however, for techniques aimed at generating solutions in direct response to a problem.

CIT 38: Designing "Extreme" or "Ideal" Solutions from Various Points of View

This is a standard mechanism in the design professions. A designer generates an alternative which is "perfect" from one single point of view in order to learn something about the design problem rather than to actually use the design thus generated.

CIT 39: Parallel Search

When one has worked on solving a given problem for some length of time, it may become very difficult to put the work aside and pursue the same problem from a different angle; one tends to get into a mental rut. One way to counteract this phenomenon is to have several designers, who do not in any way communicate with each other, work on the same problem in the hope that they will not all get into the same rut.

IX.C. Non-Techniques

While each of the described techniques has drawbacks of one kind or another, some techniques are burdened with particular liabilities, which make their usage particularly dangerous or difficult. The label, "non-techniques", is perhaps an overstatement since we really are not suggesting that these techniques never be used, only that they be used with caution. The intent is to warn the location team which is considering using one of these techniques to be particularly careful and to be fully aware of the technique's drawbacks, that measures should be taken to overcome each of the drawbacks, and that there is not some safer technique available which could be employed to accomplish the same purpose.

The specific problems with each technique which concern us are explained in the following paragraphs. Basically, the greatest danger arises from the presumption that one or two techniques, such as a public hearing or a community advisory committee, is all that is necessary to achieve effective community interaction. This is untrue! What is required is a frame of mind reflected in the community interaction objectives described above and a carefully-executed multi-faceted program of community interaction.

CIT 10: Dealing with the Public in the Highway Agency Offices, as a Non-Technique

This technique may lead some location teams to centralize the task of answering public inquiries rather than to organize a procedure to respond to inquiries. Centralization may result in insulating the location team from public inquiries, which would be very counter-productive

to the whole approach. Therefore, this technique should be implemented only by someone who is fully aware of the dangers inherent in the technique.

CIT 12B: Public Hearings, as a Non-Technique

Public hearings are the perfect setup for confrontation, the making of demands and ultimatums, and the taking of other hard stands from which it is difficult to back down. Consequently, a public hearing should never be used as a substitute for working meetings and other methods for negotiating accommodation among the various interests.

CIT 14: Using Advisory Committees, as a Non-Technique

The history of citizen advisory committees indicates that an appointed citizen advisory committee can be no more representative of local interests than the body which makes the appointments.

If the committee's membership excludes - by accident or by design - any interest, it is subject to the same criticisms leveled at established governments and agencies. If it is not to exclude any interest, it really cannot have a closed membership. But if it is not to have a limited - and therefore closed - membership, why have a committee at all? Why not simply make the effort to interact with all the interests?

CIT 15: Hiring an Advocate for the Community, as a Non-Technique

The big problem with this technique is: Since we have defined the community to consist of different interests, which one of these interests is the advocate to work for? If, however, the interests do in fact combine rather well into one "community", and therefore into one client for the advocate, the technique may have merit. But even if this is the case,

the location team should not engage in the technique unless they can do so whole-heartedly. If the team has any reservations about paying for an advocate who then works completely in the interest of his client - i.e., some community interest - then the team is probably better off not using this technique.

CIT 20: Collecting Data, as a Non-Technique

Too often a location team will set out to collect all the data it can. But any collection of data is worthless unless the team knows precisely why it needs the information and what it is going to do with it. Furthermore, gleaning useful concepts from statistics is a difficult process requiring much imagination and community input as to how the data should be interpreted.

Opinion polls and attitude surveys are very sensitive to how they are carried out; only sophisticated specialists should be trusted with the task of designing and administering them. Location-design decisions cannot be based solely on the interpretation of collected data. These decisions involve value judgements which cannot be settled by "cold facts"; it requires direct community input via open community interaction.

CIT 31: Conducting an Experiment, as a Non-Technique

If there is no chance of failure, the exercise probably is not an experiment; and if the location team cannot face the prospect of failures, it should not be carrying out an "experiment".

CIT 32: Charrette, as a Non-Technique

The deep public involvement necessary in a charrette experience probably cannot be mustered unless there is general agreement on a set

of action alternatives, each one of which is considered to be significantly better by each interest than the no-highway alternative.

CIT 33: Employing Community Residents on the Project, as a Non-Technique

This is an extremely sensitive technique. Seeing to it that local residents get a share of the jobs is the least controversial of the three parts of the technique, but even this may be very difficult to bring off because of legal constraints on contract bidding.

The other two parts of the technique are best left alone; they invite charges - rightly or wrongly - of attempts to "co-opt" the community.

IX.D. Community Interaction Management

Management of community interaction activities is crucial if a program using several techniques is to be properly coordinated and fully effective. The set of techniques must be not only coordinated but also carefully interfaced with other on-going location team activities. Management will vary considerably with such differences in context as the size of the team, the degree to which consultants are being used, the existence or absence of controversy, or the phase of the location-design process.

Developing a community interaction program of activities and then managing that program can be carried out using the basic six-step work program introduced in Section A of this chapter.

Step 1) Review community interaction objectives vis-a-vis the overall location-design objective.

The eleven general community interaction objectives are reviewed

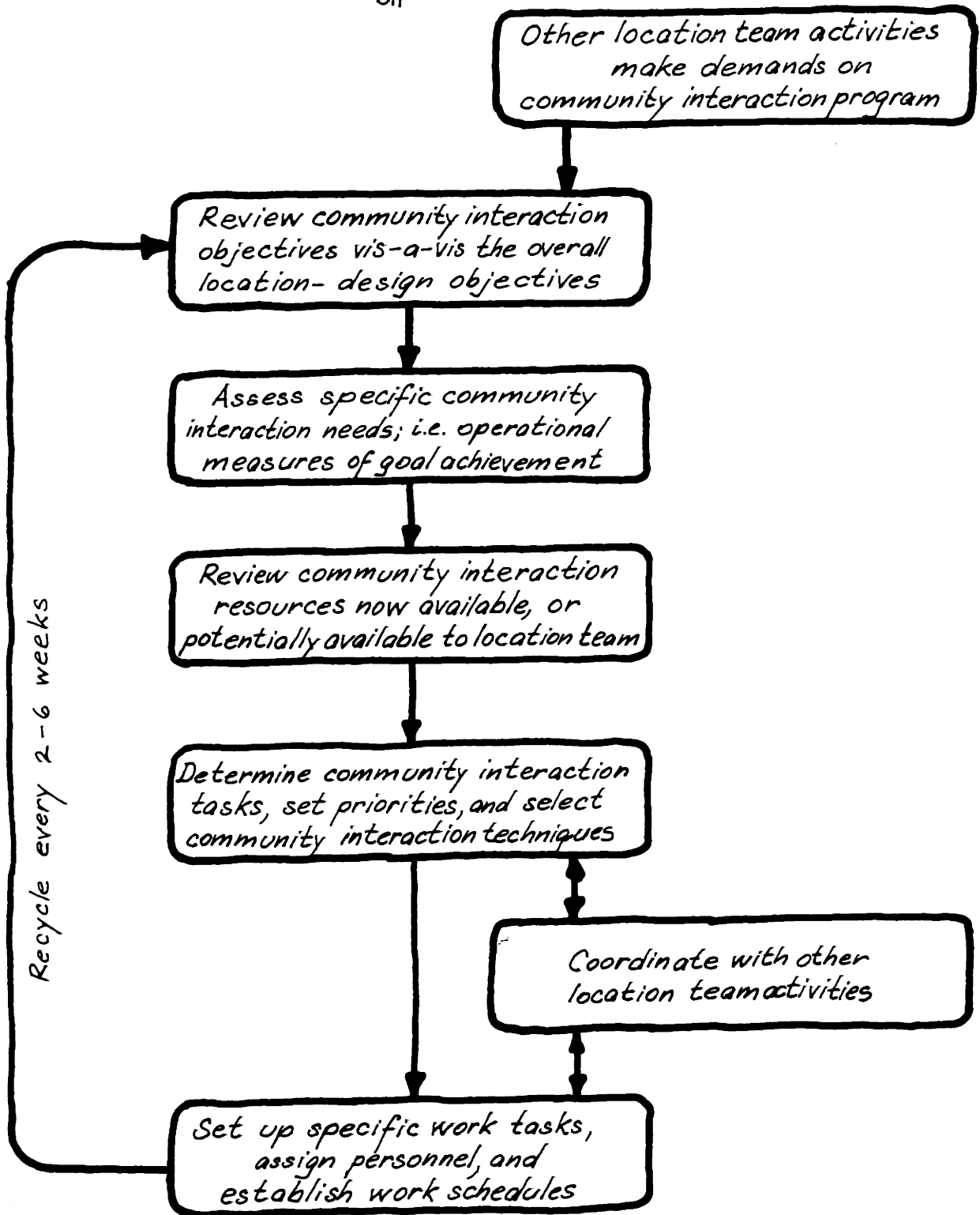


FIGURE IX-4: Community Interaction Management

vis-a-vis the central objective of the location-design process (achieving substantial, effective public agreement on a course of action which is feasible, equitable, and desirable)¹⁸ and used as a basis for selecting a set of specific objectives, including the establishment of priorities. These objectives are then periodically reviewed and adjusted as necessary for the duration of the study.

While community interaction is an important location team activity, it need not be the tail which wags the dog and the overall phased process strategy determines what specific contributions community interaction should attempt to make to the location-design process. For instance, in the initial phase, the community interaction program should be designed to help identify all affected interests and all issues; in later phases community interaction will be called upon to contribute to the main thrust of those phases, e.g., generating solutions, exploring values, searching for consensus. Thus reviewing the community interaction objectives should be reviewed in the context of the overall location-design objective and the substantive demands which the overall process is making on community interaction at that particular phase.

Step 2) Assess the specific immediate community interaction needs.

Ideally we would like a yardstick or gauge for measuring at least approximately how close we have come to reaching a community interaction objective, and how much additional effort is needed to achieve that objective. Since such hard and fast scales do not exist for measuring the

¹⁸For an in-depth discussion of the central objective of the highway location-design process, see Urban Systems Laboratory Report No. 71-4, (M.I.T., Cambridge, Mass., 1971), p. II-2.

degree to which an objective of this nature has been met, individual judgment and the collective wisdom which can spring from candid discussion can best be facilitated by asking and answering a set of hard and specific questions about the community interaction program and its results to date.

A set of questions for each of the community interaction objectives outlined in section B of Chapter VIII are listed in the following paragraphs. Answering these questions will be helpful in the assessment of needs, either for the overall program or for a particular interest group. Three alternative methods of answering these questions come to mind:

- 1) Make it an in-house project where the location team discusses the issues raised by each of the questions.¹⁹
- 2) Retain the services of a disinterested but well-informed outsider to help answer the questions. Examples of such outsiders are:²⁰
 - a non-partisan citizen's group, such as the League of Women Voters,
 - a private research institution with top-level managerial capabilities, or
 - an academic inter-disciplinary group with expertise ranging

¹⁹One obvious drawback of this method is that, because the location team is deeply involved in highway decision-making, its views are far from representative of the general public. In assessing the needs of such Community Interaction Objectives as Legitimacy-Establishing, Concept-Forming, Problem-Detecting and Anticipating, Solution-Finding, and Value-Exploring, it is particularly important to get an assessing method which is capable of taking the public's perceptions of the decision making process and substance into account.

²⁰The provision of dis-interestedness requires, of course, that the particular group in question not be partisan in any highway controversy.

across the spectrum from technical to socio-political specializations.

- 3) Use of direct public response, or community interaction itself. While this may be the best method, it is also almost certainly the most difficult and time consuming since it requires the soul-searching which goes along with trying to answer the questions in public and inviting - even provoking - responses from the public.

The normal tendency is to make these judgments implicitly about community interaction needs. The primary objective of the recommended questions is to make these judgments more explicit. Searching for and then writing down answers to questions for each of the objectives is the mechanism for transforming the traditionally implicit judgments into explicit statements of need.

Questions to assess needs for objective "Establishing and maintaining agency and process legitimacy".

- By what authority is the highway agency carrying out the project?
- What are the location team's (or the highway agency's) specific responsibilities on the project in question?
- What are the time, money, and other constraints?
- Does it appear feasible to develop an equitable solution within these constraints?
- Do the various affected interests in the community perceive the highway agency as being fair, impartial, and disinterested?
- Is the process that is being followed accepted by the various community groups?

- Are potential negative impacts researched as thoroughly as possible?
- Are predictions of negative impacts being disseminated candidly?
- Do any groups, institutions, or individuals consider the agency to be working for a special interest?

Questions to assess needs for objective "Maintaining validity of earlier decisions".

- What systems and network decisions preceded the current location-design process?
- What assumptions were implicitly or explicitly part of those larger decisions?
- Are those assumptions still valid?
- If so, have we successfully made known to the community our rationale for continuing the decision-making process which sprang from those assumptions?
- Which interests do not accept those assumptions?
- What re-thinking, and maybe backtracking, is necessary?
- Have we taken, or are we taking, the initiative in adjusting our decision-making as we have gained knowledge over time?

Questions to assess needs for objective "Formation of new concepts".

- In what ways does the locality, and the various groups and institutions in the locality, differ from other localities we are dealing with?
- What is atypical about the community at hand, about the highway problem in question, about resources that could potentially be

brought to bear?

- What specific efforts have been made to come up with new conceptual models of relevant problems at hand, or of parts of these problems?
- What stands in the way of developing the ideal solution, a solution which leaves everyone better off than they were before?
- For each affected interest: What are the most important issues?

Questions to assess needs for objective "Establishing facts".

- What issues need to be settled?
- For each of these issues, what kind of facts could settle the issue?
- Which interest might disagree on that? Why?
- For each of these issues, which of the facts are readily measured?
- How reliable are the alternative techniques of measuring?
- How confident can we be of the facts thus gathered?
- In light of all this, what are the facts that ought to be gathered so the relevant issues can be settled beyond dispute?

Questions to assess needs for objective "Detecting and anticipating community problems".

- What problems do the various interests which make up the community have?
- What problems may these interests have in the future?
- What can be done to alleviate or solve these problems?
- How will the unresolved problems affect, directly or indirectly, the ability to develop an alternative which will achieve effective

public support?

- Will the alternatives currently being contemplated create a new problem for any interest, or aggravate an existing problem?

Questions to assess needs for objective "Finding solutions".

- What components must a solution-package have in order to respond to each of the needs created by anticipated highway impacts?
- For particular problems, or parts of problems, are solutions still needed?
- Is there an up-to-date list of all solutions, or partial solutions, suggested by interest groups?
- Have all suggestions been thoroughly scrutinized to find all promising ideas?
- Has each possible program element been examined?
- Are there any ingenious solutions that have been developed elsewhere that might have application to the problems here?

Questions to assess needs for objective "Exploring values".

- What are some of the things that are valued highly by the various interests in the community?
- Potentially, how many of these values can be enhanced?
- Which ones might some of the contemplated actions affect negatively?
- If some are affected negatively, can alternatives be designed which offer the various interests choices as to which of their values will be affected negatively?
- Has the whole community, or some of its constituent groups,

recently made some choices between different values, possibly outside the highway context?

- How have the community's values been changing, as expressed by actual choices?
- When compared to other communities has the community been a leader, a lagger, or a median participant in the process of changing its values over the past 10-30 years?
- What value changes can we anticipate in the foreseeable future? On what basis?
- What ramifications do anticipated value changes have?

Questions to assess needs for objective "Establishing and maintaining credibility".

- What information is not being disseminated? Should it be?
- How reliable do the various interests consider our word to be?
- Who does not trust our word? Why not?
- What are the costs and the benefits of making all relevant highway information available to the public?

Questions to assess needs for objective "Communicating".

- Which interests are not up-to-date on location team activities, the location-design process being followed, the range of feasible alternative courses of action, and their respective consequences?
- About which interests do we not know enough?
- With which interests are we not in two-way communication on a regular basis?
- What channels of communication are being used?

- To what kind of distortion is each of these channels particularly susceptible?
- What is being done to avoid this distortion?
- What (potential) channels of communication are not being used?

Questions to assess needs for objective "Depolarizing interests".

- Which groups perceive themselves to have conflicting interests?
- Why the conflict?
- Is it conceptually possible to satisfy the needs of both conflicting interests?
- What problem redefinitions would this require?
- What values or concerns do the actors in question share?

Questions to assess needs for objective "Searching for consensus".

- How does each of the interests in the community perceive the alternatives being developed?
- Which interests have not been playing a direct role in the decision-making to date?
- Which interests feel that the location-design process is ignoring them?
- Which interests believe they would be best off with the null alternative?
- How can we augment the alternatives under consideration to make them preferable, for the interests in question, over the null alternative?

Step 3) Review Community Interaction Resources

Having established and assessed needs, the technical team examines

the personnel and fiscal resources at its disposal or that might be put at its disposal. This is more than just determining the amount of manpower and funding that can be invested in community interaction; at least as important are the qualifications of the manpower.

Community interaction is more than just another work task; opportunities are offered to agency staff to develop a deepened and unique understanding of the community and of how the community's constituent interests perceive the highway impacts. Delegating this task to a consultant, or even a public relations office, in effect deprives the technical team of this opportunity and of the resulting benefits.

A checklist of questions for the location team to ask itself might include:

- What kind of time, fiscal, and manpower resources are available?
- Is it possible to get additional money, manpower, and time if the community interaction needs warrant it?
- How would the expected results be improved if the community interaction resources were expanded?
- What are the special skills of the people already on the projects?
- What are their strengths and weaknesses?
- Which ones can be freed from what they are doing to undertake new or additional community interaction activities?
- Who on the staff would benefit from the broadening experience as a result of carrying out some particular kind of community interaction activities?

These questions cannot be addressed without having some specific community interaction tasks in mind.

Step 4) Community Interaction Tasks, Set Priorities and Select Techniques

Considering the specific objectives, the community interaction needs, and the available resources, the location team can define specific tasks to be accomplished. It can select the particular community interaction techniques, and other resources to be used with each task. In defining tasks, the location team reviews the interaction needs of each affected interest, asking itself about each actor: exactly what does the team want to accomplish through interaction. For some objectives, such as fact finding, the tasks may follow directly from the questions asked in Step 2 to assess needs. For other objectives, such as legitimacy and credibility, however, different task statements may be formulated for different interests having essentially the same need.

Once initial tasks have been defined for each of the needs identified in Step 2, priorities are set among them with respect to the central process objective of obtaining substantial, effective community agreement on a course of action.

The resource constraints identified in Step 3 and the priorities are used in selecting techniques to accomplish the defined tasks. There are a great many techniques, each with advantages and disadvantages. To select techniques, the location team examines tradeoffs between advantages and disadvantages. A single technique may accomplish several tasks, and a single task may require a sequence of several techniques.

As interaction needs and the corresponding tasks change, the techniques being utilized should also change. Some techniques, such as a field office, are essentially continuous in nature and have their own momentum. Unless carefully managed, such techniques might continue to

be used long after they have accomplished their specific objectives. This can be avoided best by a frequent, careful, and explicit review of interaction needs and tasks. When tasks are completed, the corresponding techniques should be either discontinued or altered for use in accomplishing other tasks.

Step 5) Coordination with Other Location Team Activities

Each step in developing a community interaction program of activities should be closely coordinated with impact prediction, development of alternatives, evaluation, and overall process strategy, and reviewed against the current activities and needs in each of these other functional areas. Each location team activity makes demands on, and sets constraints for, community interaction. As the interaction program is developed, the objectives, needs, constraints, and task priorities are determined cooperatively with these other activities. This step is a final check to insure that the interaction program is compatible with all other location team activities.

Step 6) Set-up Specific Work Assignments, Assign Personnel, and Establish Work Schedules

The final step in the process of turning general community interaction objectives and the substantive demands from other location team activities into a completely operational program of activities is the development of a set of job assignments for specific individuals to be performed on a reasonably set schedule.

The personnel assigned to carry out the community interaction program need not be thought of as being a group separate from the other lo-

cation team staff. The more community interaction activities that can be executed by the personnel engaged in the other four location team activities, the better. If the community interaction activities are left to one group, communication from that group to the rest of the location team can become a major bottleneck. The community interaction group may find itself on the "outside" of the location team, always trying to communicate its insights to the rest of the team. Letting a consultant do the community interaction work tends to build the same problems into the process.

Examination of the definition of community interaction²¹ implies that all members of the location team should carry out the community interaction activities.

When this is not possible, i.e., when community interaction activities have to be delegated either to a special unit within the highway agency or to a consultant, special attention should be given to the interface between the community interaction group and the rest of the location team. In any event, there is a clear need for identified responsibility within the location team for coordination and monitoring of all community interaction activities.

²¹ i.e., Community interaction includes:

- all of the ways by which the location team learns about the community,
- all of the ways by which the community learns about the location team, and
- all of the ways by which the location team and the community work together to achieve agreement.

IX.E. Summary

The location team has a number of resources that it can bring to bear to achieve its community interaction objectives, namely time, funds, and community interaction techniques. It needs to manage these resources in direct response to the particular (community interaction) needs of the problem at hand; what is even more important, however, is that it has to assess and to continue reassessing what the community interaction problems and needs are.

The location team has to try and understand how the lay actors are perceiving the location-design problem, the decision-making process, the agency's role, and the range of available options. It is futile for the location team to work on a problem which the public does not feel should be worked on; it is useless for the location team to proceed with a location-design process which the community feels is inherently unfair to them; it is unrealistic for the location team to ignore the existence of the null-alternative as long as some interests see it as the best alternative. Thus, the location team must for ever ask itself the most soul-searching questions about what it is doing; if it is candid in answering them, it can detect community interaction needs before they develop into crises. While the highway professional has the capability of understanding, to a considerable degree, what the various lay interests' values are and anticipating how they perceive the available options, he should never use his vicarious understanding of the lay actors when it is possible to have the lay actors make their own, direct input to the location-design process. The location team's

community interaction program provides a great number of potential opportunities for the lay actors to bring their own values and perceptions to bear directly on the alternatives that are developed and for the community of affected interests to bring their shared values to bear on the decision-making process. The various community interaction techniques provide the mechanisms for opening the highway location-design process up to all affected interests.

All this stress on trying to see the location-design issues through the eyes of the lay actor is quite different from currently prevailing location team attitudes. Whereas most highway professionals (see Chapter VII) see themselves as the custodians of the social values, we are suggesting that they, instead, let themselves and the location-design process (more specifically: the community interaction program) be used as vehicles for bringing the lay actors' values to bear on the location-design alternatives.

The location team which is motivated to help the various interests which make up the public find and choose a course of action that they can all endorse will want to open the highway location-design process up to the public and will want to make the process, the agency's role, the underlying assumptions, and the feasible options understood by the man on the street; the location team which is motivated thus will develop and run a community interaction program to bring the location-design process in conformance with the basic decision-process criteria.²²

²²See Chapter II for a discussion of the four basic decision-process criteria: 1) Understandability and believeability, 2) Identification of applied values, 3) Role of the group's cultural values, and 4) Adaptability.

PART D:
CONCLUSIONS

CHAPTER X: TOWARD A PROFESSIONALISM FOR
PUBLIC SERVANTS

An approach to decision-making by a public agency which is consistent with the decision-process criteria of:

- 1) Understandability and believeability,
- 2) Identification of applied values,
- 3) Role of the group's cultural values, and
- 4) Adaptability

as they were developed in Chapter II, constitutes the basis for a professionalism for public servants. The entire study can be seen as an effort to define this professionalism.

CHAPTER X:

TOWARD A PROFESSIONALISM FOR PUBLIC SERVANTS

- X.A. The author's values and view of the universe
- X.B. A frame of mind
- X.C. An approach, a strategy
- X.D. How realistic are our basic assumptions?
- X.E. How realistically feasible is the proposed strategy?
- X.F. Summary: A new professionalism

ABSTRACT

The author's values and his view of the universe relative to a public agency's role in group decision-making are couched in terms of decision-process criteria, assertions, and observations and are offered mostly in Chapters I and II. These assertions and observations constrain what we, as the hypothesized public agency, can and cannot do to help a group of interests find and choose a course of action.

When we combine all these constraints they are best expressed as a frame of mind. In this frame of mind we, as the public agency:

- see ourselves as a value-neutral actor working in a context of a group of interests, each with its own and essentially sovereign value system,
- know that there is no entirely objective algorithm through which we - or anyone else - can produce and/or choose a course of action.
- recognize that the group does not subscribe to any doctrine which is sufficiently powerful to determine a course of action.

The strategy of augmentation and meta-process proposes that we search for design packages which respond directly to the various individual interests' values and that we look to the group's cultural values for guidance in the design of the decision-making process and for the setting of constraints on the process or the alternatives.

Our frame of mind and the proposed approach result in a professionalism defined in terms of responsiveness to the subjective values of the various interests which make up the community, and in terms of responsibility to the community's cultural values. The individual and the cultural values are held by the man on the street, they are not abstract, esoteric phenomena that have meaning only to the professional.

The suggested frame of mind and the proposed approach constitute the making of a professionalism for public servants.

X.A. The author's values and view of the universe

Just as it is impossible to develop alternative courses of action in response to some perceived problem without bringing values to bear on the decision-making process to varying degrees throughout the process, so it is impossible to address a problem of the nature that this study has addressed without bringing values and other kinds of subjective knowledge, i.e. a view of the universe, to bear. The author's values, his preferences and prejudices, as well as his own view of the universe - peculiar to his perceptions and his particular experiences - form the basis for the decision-process criteria of Chapter II, in fact for the problem. In order to let the reader get to the root of the issues, the author has flagged all of the subjective statements by calling them Observations, Assertions, and Criteria. While all of them involve a certain amount of subjectivity on the author's part, some are clearly more debatable than others. Those statements which, the author feels, have some claim to being "self-evident truths" are labelled "Observations"; those statements which are made more willfully by the author are labelled "Assertions", and those statements which are very basic, but nevertheless subjective statements which have a particularly broad application to a decision-making process of the nature we are dealing with here, are labelled "Decision-Process Criteria".

Together the Observations, Assertions, and the Criteria pose limits within which the problem we have been addressing has to be solved; they also have provided the basis for the solution - i.e. a strategy of augmentation and meta-process - we have developed. Let us review the Observations, Assertions, and Criteria in the sequence in which they are

introduced in the text.

Observation # 1 (Section B, Chapter I)

- 1) Each interest¹ holds a set of values,
- 2) Each interest has its own view of the universe and its own models of its means-ends relations;
- 3) Applying its values to its view of the universe, each interest can construct a conceptual network of goals and actions, which links its₂ highest goals with the perceived alternative courses of action² via its perceived means-ends relations.
- 4) Each interest can rank the perceived alternative courses of action.
- 5) Each interest pursues that course of action which it ranks highest.

Observation # 2 (Section B.2, Chapter I)

The typical geographically defined collection or group of people, institutions, and corporations - e.g. what is usually referred to as a community or a neighborhood - is not homogeneous. It does not subscribe to a single, internally consistent set of values; it is made up of diverse interests.

Assertion # 1 (Section B.3, Chapter I)

The public agency responsible for helping a community³ develop and choose a course of action does not have a set of its own values, in the sense that the individual interests who constitute the community membership have their own values; the public agency is relatively value-free.

¹Definition: interest, or individual interest (Section B.1, Chapter I)
An individual interest is a person, a collection of like-minded persons, a corporation, an institution, or any other entity with one view of the universe and a single, internally consistent value system.

²Definition: alternative course of action, (Section B.3, Chapter IV)
An alternative course of action (or an alternative) is one of several sets or sequences of actions which an actor believes:

- 1) will serve to attain his goal, and
- 2) is feasible to carry out.

A course of action does not necessarily constitute a solution; it is simply a description of the next thing the actor should do.

³Definition: group, or community (Section B.2, Chapter I)
Group and community are interchangeable terms; a group or community consists of two or more individual interests who have reason - or are believed to have reason - to work jointly for some common purpose.

Decision-process Criterion # 1: Understandability and believeability:

(Section A, Chapter II)

All of the group's members must either be able to understand the decision-making process and the agency's role in it, or they must believe and trust the public agency enough that they are willing to take the agency's word for what it is doing.

Observation # 3 (Section A.1, Chapter II)

Actors act on the basis of perceptions. For any individual actor there is no abstract reality apart from perceived reality.

Assertion # 2 (Section A.2, Chapter II)

The public agency can contribute to the lay actors' definition of the problem, but the lay actors have the last word and thus, in the end, it is their definition of the problem that counts. The public agency cannot legitimately work on a problem for very long if the group does not perceive a problem to exist.

Observation # 4 (Section A.4, Chapter II)

We cannot assume that preference orderings are independent from what are normally called irrelevant alternatives.

Observation # 5 (Section A.5, Chapter II)

Conceptual compensation cannot be used as a substitute for actual compensation.

Decision-process Criterion # 2: Identification of applied values (Section B, Chapter II)

Value-laden decisions are made throughout the process, but whenever values are brought to bear, it has to be clear to all whose values they are.

Assertion # 4 (Section B.1, Chapter II)

Within the limits of a group's cultural values⁴, each interest's values are sovereign.

⁴Definition: Cultural values (Section B2, Chapter I)

A group's cultural values are those values which the group's members share; a group's set of cultural values consists of the intersection of all their sets of values.

Observation # 6 (Section B.2, Chapter II)

There is no higher authority, no ultimate set of values, and therefore no ultimate evaluator - short of the group of actors itself and the values they will hold with the benefit of hindsight.

Observation # 7 (Section B.3, Chapter II)

There is no objective, practical way for making interpersonal comparisons of utilities; they have to be negotiated.

Observation # 8 (Section C, Chapter II)

In the process of working out conflicts that arise while striving to achieve a common purpose, every group develops and uses a body of shared values; if it already has such a body of cultural values, the group uses it and amends it.

Decision-process Criterion # 3: Role of the group's cultural values

(Section C, Chapter II)

The group's cultural values provide the envelope for all public agency activities; parameters of fairness, justice, equity, and propriety constitute bounds for the decision-making process in general and for the public agency's activities in particular; they also constitute the constraints within which alternative courses of action have to be developed.

Assertion # 5 (Section C.1, Chapter II)

The group has to be able to review the decision-making process, the public agency's activities, and the range of alternatives, and it has to be able to evaluate the process in terms of its shared sense of fairness, justice, equity, and propriety.

Assertion # 6: (Section C.2, Chapter II)

The group decision-making process has to be able to respond to cultural values which stress the qualitative differences of impacts among courses of action; the process has to be capable of compassion.

Observation # 9 (Section C.3, Chapter II)

Actors are not equal.

Assertion # 7 (Section C.4, Chapter II)

The public agency actor⁵ has to become the advocate for any interest not represented by an actor in the group.

⁵Definition: public agency actor (Chapter II)

Observation # 10 (Section D, Chapter II)

Time changes everything.

Decision-process Criterion # 4: Adaptability (Section D, Chapter II)

Changes that occur over time have to be accomodated, and the decision-process has to be adapted itself to these changes.

Observation # 11 (Section D.1, Chapter II)

The set of alternative courses of action being considered can never be assumed to be a closed set, and the null-alternative is always a member.

Assertion # 8 (Section D.2, Chapter II)

The decision-making process has to be flexible enough to permit backing up, re-cycling, starting over, and making other kinds of changes.

Observation # 12 (Section B.2, Chapter III)

A choice can be fair, just, equitable, and proper either because the nature of the impacts and the distribution of their incidence meets the group's standards or because the choice process is inherently fair.

Observation # 13 (Section A1, Chapter IV)

While every interest has a teleological goal fabric⁷, a public agency never does.

Observation # 14 (Section A1, Chapter IV)

Within the limits of a group's cultural values, each interest's teleological goal fabric is sovereign.

The public agency actor consists of only those parts or elements of the public agency which are directly responsible for - and therefore involved in - helping the group of interests develop and choose a course of action.

⁶Definition: inherently fair choice process (Section B.2, Chapter III)
An inherently fair choice process is a choice process which makes the resulting choice fair, just, and equitable - although the distribution of impacts of the choice are not fair, just, and equitable.

⁷Definition: teleological goal fabric (Section A, Chapter IV)
The teleological goal fabric is that part of an individual interest's goal fabric which consists of means-ends relations that embody, at least in part, the interest's ultimate goal or purpose.

Observation # 15 (Section B, Chapter IV)

The individual's decision-making process includes six steps which, if they are not executed in sequence, should be carried out in such an iterative sequence that, with the benefit of hindsight, it can be demonstrated that they affected each other as if they had been executed in sequence.

Observation # 16 (Section C.1, Chapter IV)

Differences in actors' preference orderings stemming from differences in the mechanistic⁸ parts of their respective goal fabrics can, at least conceptually, be resolved by providing more, or more perfect, information.

Observation # 17 (Section C.2, Chapter IV)

An actor is the final authority on his subjective values; therefore, differences between actors' preference orderings resulting from differences in the teleological parts of their goal fabrics cannot be resolved without at least one actor changing his values.

Observation # 18 (Section C.3, Chapter IV)

The public agency has to meet its mandate to help the group develop and choose a course of action in the face of:

- 1) the fact that choices between alternatives inherently require choices between conflicting values of actors and
- 2) the fact that one actor's values are not "right" and another actor's values "wrong" - or one actor's values "more right" than another's.

X.B. A frame of mind

Acceptance by a public agent or agency of all, or most, of these value-laden, in fact, value-giving statements culminates in a frame of mind.

To place ourselves again in the public agency's role: First, we see

⁸Definition: mechanistic goal fabric (Section A, Chapter IV)

The mechanistic goal fabric is that part of an individual interest's goal fabric which consists of means=ends relations that are (perceived to be) completely independent of the particular interest's values; they represent linkages of a mechanical nature.

ourselves as a value-neutral actor with a community consisting of individual interests each with its own and essentially sovereign value system. While different actors may have quite different values, their value systems have some minimum overlap; they share some basic values. These shared values constitute the community's cultural values, and constitute the only value system which we can - in fact must - use as legitimate, applicable social values. Beyond our embrace of the cultural values, however, we must be completely unbiased toward any interest's values.

Second, our frame of mind is such that we know that there is no entirely objective method or algorithm by which the "best" course of action can be developed and/or chosen. At the same time, we recognize that value-laden decisions are necessary throughout the process of developing an alternative, as well as at the end of that process, when a choice among alternatives has to be made. We are particularly aware of the fact that there are very technical operations, even mechanical operations, which appear to be entirely value-free but which rest on implicit value assumptions.

Third, we recognize the fact that the community does not subscribe to a doctrine which is sufficiently powerful to determine for the community which course of action it should pursue.⁹

To paraphrase this frame of mind: We are value-neutral, but public policy choices require value-decisions. We have no technical processes which can find or choose a course of action, and the public has no compelling, doctrinaire system of belief which can do it either. However, the lay

⁹In other times or places than the United States today this might, of course, not apply; the community may subscribe to a powerful doctrine with a very deterministic effect. If that is the case, the problem at hand does not even arise, and the public agency has a relatively easy role to play.

actors are neither ignorant about their needs and wants nor are they entirely incapable of resolving conflicts. The only values that have any standing are the community's cultural values and the various interests' own diverse, disparate, even conflicting individual value systems.

The public agency which is of this frame of mind distinguishes clearly between decisions which require the application of some value system and those decisions which do not. Such an agency does the best it can to make it possible for the potentially impacted interests to bring values to bear by letting them make the policy decisions.

X.C. An approach

Even if the Observations, Assertions and Decision-process criteria which make for this frame of mind did not lead to a specific strategy,¹⁰ they would nevertheless compel the agency to behave in a somewhat predictable way:

- 1) The agency would forever have to be concerned about whose values were being applied;
- 2) The agency would make an effort to learn all it feasibly could about all potentially affected interests;
- 3) The agency would want to make sure that the public understood and

¹⁰ Definition: strategy (Section C, Chapter X).

A strategy is a decision rule, or a set of operational instructions, which is sufficiently complete to leave no doubt about what is to be done - no matter which of all feasible eventualities occurs in the intervening period between giving the instruction and taking the action.

approved of the agency's activities throughout the decision-making process.

The proposed strategy of augmentation and meta-process has us look to the community's cultural values to make sure that the decision-making process in general, and our (public agency) activities in particular, do no violence to them, and it has us look to the various interests' individual values to find the clues for molding a package of features which address the problem of overcoming all of the contemplated actions' negative impacts. This approach grows rather naturally from the frame of mind that was discussed above.

We continuously review what basic assumptions have been and are being incorporated in the current decision-making, and we check whether these assumptions are still valid in the light of the group's changing cultural values and in the light of changing knowledge about impacts and options. We do the same for making sure that our activities stay strictly within the limits of what the community considers the legitimate domain of public agency activity. In doing all this we might make our own assessments of what the community's concept of fairness, justice and equity is, but we realize that our assessment is no surrogate for the community's own judgment. The only sure way to determine whether the basic assumptions are valid and whether the process and our role in it is legitimate in the public's eyes is 1) to make sure that the public is at all times fully aware of what the assumptions, the process, and our activities are, and 2) to make sure that the public has ways of letting us know when the assumptions, the process and our activities get out of step with the public's evolving relevant cultural values. It is our job to make the issues of legitimacy sufficiently clear to the public

so the man on the street understands them and can make his input. In the case of the highway location-design process, we must change our motivation from a static one of implementing earlier network decisions, to one of continuously adjusting the previously-made decisions to keep them, as well as the immediate purpose, consistent with the community's changing cultural values.

Our role in the development of an alternative is not all that different from keeping the decision-making process consistent with the group's cultural values, since it grows from the same frame of mind. Instead of looking for guidance to the group's cultural values, we look to the many individual values. We find out how the anticipated impacts will affect - and be perceived by - the various interests, and we search for specific design features which can overcome, counteract, or compensate for the anticipated negative impacts. In the case of highway decision-making it means that we have to broaden the definition of highway use to the point where it reaches as far and wide as the highway impacts do. The solutions to highway problems have to be made up of relatively comprehensive packages of features which have the capacity to address those values of each actor which are affected by the highway; we have to press for, encourage, humor - and in any other legitimate way we can facilitate - the necessary negotiation between the actors to effect a collective decision.¹¹

¹¹ This model of the public agency's role in responding to a spectrum of individual interests and individual actors, is compatible with descriptive community decision-making models which observe that, typically, no single interest can assure the choice of an alternative.

See, for example, Banfield's model of "Concerting Action By Influence", Edward C. Banfield, Political Influence, (N.Y.: The Free Press of Glencoe, 1961), particularly Chapter II.

This approach of checking the validity of the decision-making process, the agency's role in it, the basic assumptions and earlier decisions against the group's cultural values before proceeding to the substantive problem-solving, and of checking the desirability of a course of action against the affected individual interests' own relevant values in reshaping the course of action - is more than a general approach; it is also a strategy.

Definition: strategy

A strategy is a decision rule, or set of operational instructions, which is sufficiently complete to leave no doubt about what is to be done - no matter which of all feasible eventualities occurs in the intervening period between giving the instruction and taking the action.

Whether the public agency finds that it is involved in the appropriate decision-making process or not, whether it finds that it is playing the right role or not, whether the basic assumptions are still valid or not, whether the earlier decisions still stand or not, whether any of the existing alternatives can form the basis for a collective choice or not, - etc.; the strategy tells the public agency what to do next.

X.D. How realistic are our assumptions ?

While any of the underlying assumptions may be questioned, the ones which are most likely to be found unrealistic by the reader have been expressed in the form of assertions.

Assertion #1, which holds that the public agency is relatively value-free is easily the most controversial assertion. Note, however, that it is not asserted that the public agency has no values but rather that it

has no values relative to the group's common purpose, that the agency is relatively value-free - i.e. relative to the group's common purpose. In any context where this does not hold, the public agency constitutes an interest of its own, or it is part of one of the interests; none of the community's interests - except for those who share most of such an agency's values - should want to hire such an agency.

The context where the "public" agency has a set of values of its own is simply not addressed by this study; there are two reasons for this:

1) The "public" agency which has a set of values (relative to the group's common purpose) of its own, constitutes an individual interest. It faces an entirely different problem from the one we pose here; in fact, it faces essentially the same problem that an individual interest faces in a group decision-making context.

2) There are a great number of strategies, methods and theories available to the individual interest to help him make his actions consistent with his values.

As was mentioned in Chapter I, the reader who feels that there is no such thing as a public agency which is willing and able to work for a group of interests without pursuing a hidden agenda of its own, must perforce come to the conclusion that no group - as defined here¹² - should ever engage the services of a professional. In fact, if he feels that an agent, i.e. a professional staff, necessarily always has a hidden agenda, there is no reason that even a single interest - or anyone else - can safely employ a professional staff. The reader who rejects Assertion #1

¹² See Section B.2., Chapter I.

consequently also has to reject the idea that anyone should ever engage the services of a professional.

Assertions 2,3,4,5 & 9 are not really controversial; they are a further detailing or specifying of the problem that we have set out to solve. The combination of these five assertions states, in an operational way, what it means to have the community of interests perceive a common purpose and hire a staff to help them find and choose a collective course of action. Assertions #6, 7 and 8 actually begin to give us direction in designing a decision-making approach. They are not absolutely essential; while the author cannot think of a substitute set, it is entirely conceivable that they could be replaced with quite a different set. Replacing them with different requirements would, most likely, lead to an approach to decision-making with quite a different role for the public agency.

We can conclude, then, that of the assertions - which constitute the author's most wilfully made statements - only the first, i.e. Assertion #1 dealing with the public agency's value neutrality, is potentially controversial. And, since the negation of this assertion would have to be based on an assertion to the effect that a public - or non-public - agent or agency necessarily has a hidden agenda of its own, the author - for one - being the head of a City Planning Department himself - is not prepared to do without Assertion #1. There are, of course, "public agencies" which fail to live up to Assertion #1, but such "public agencies" are not servants of the public at all; they are frauds. We should all cheer when the public demands that the rascals be thrown out when an agency, which is hired to serve the community of interests potentially affected by some contemplated course of action uses its professional/

bureaucratic position to exercise its own will on the public.

X. E. How realistically feasible is the proposed strategy?

Is it realistic to expect the public agency to step back from its work and ask itself: "Does the potentially affected public feel that we are working on the right problem?, in the right manner? etc.?" To be more specific: is it feasible that, after such an introspection, a public agency ever comes up with the conclusion that what it is doing is not perceived as the proper role of the public agency in a fair, just, and equitable decision-making process?

If we did not have the case of a highway agency which did come to the conclusion, we might debate for some time just how realistic it is to expect an agency to stop its own decision-making process and look for a more legitimate approach to the problem. But, the Century Freeway case offers an example where a public agency did precisely this;¹²

¹²While the Century Freeway case offers just one such example, the author is aware of at least two other examples outside the case studies.

One of these also involved the Los Angeles District office of the California Division of Highways. During the initial work of the location-design process of a particular highway - which had been established legislatively, the location team recommended to the California Highway Commission that the highway link in question not be built. The location team had, strictly speaking, no business coming up with such a recommendation because that had, supposedly, been decided by the pre-location-design process. Its recommendation thus was tantamount to saying: "it is improper to proceed with the decision-making process; we need to back up and reconsider the, supposedly, settled issue of whether the highway should be built at all."

The other example occurred in the office of the Governor of Massachusetts in the Inner Belt controversy during a time shortly beyond the period covered by Chapter XIII. Governor Sargeant, who had held the top position in the State highway agency - Commissioner of the Department of Public Works - himself, stopped all highway construction, engineering, and planning within Route 128 until a special task force, headed by (then) M.I.T. Political Science Professor Alan Altshuler, could come up with a highway decision-making process which could earn the support of a broader range of the potentially affected interests. The governor simply said:

the California Division of Highways, on its own volition, stopped the location-design process; cancelling the scheduled public hearing indefinitely, when it was felt that the potentially impacted residents were not sufficiently aware of the severity of the highway's impacts. The highway agency sought to find an advocate for the (neglected) local interests and, when no one would speak up for these interests, the agency took on the role of community advocate itself.¹³

Highway agencies do not have a reputation for leading the movement for more participatory public decision-making; if anything, they have to be identified as rather reluctant and skeptical latecomers to the dialogue. Thus, having in our hands an example case where a highway agency actually performed the very function that the reader might think we cannot realistically expect a public agency to perform, - namely 1) making an assessment of: the legitimacy of the decision-making process, their own role in it, and the validity of earlier decisions and assumptions and 2) changing or stopping the process by changing to a meta-process mode if the assessment suggests that the process is really out of phase with the cultural values of the potentially affected interests - , there is absolutely no need to develop a lengthy argument about the feasibility of the strategy.

There are, of course, other aspects of the proposed strategy of augmentation and meta-process that one might find inherently infeasible, but they are all of a much less controversial nature than the requirement of a candid, introspective public agency. For example, just what it means

"We were wrong..."

¹³See Section F, Chapter XI, for a more detailed description of the case.

to develop and implement a program of community interaction has to be learned through the experience of actually doing it. The one effort which the author has been associated with to a limited degree, namely Professor Marvin L. Manheim's research project for the California Division of Highways¹⁴, suggests - at least to the author - that, as operational as the community interaction program for highway agencies is, it is very difficult to implement as long as it is viewed as a bag of tricks; what is required first is the frame of mind on the professionals' part which was discussed in Section B above. The chief ingredient in the example of a highway agency stopping its decision-making process on its own initiative¹⁵ was a highway professional, Rudolph Hess, in a frame of mind akin to the frame of mind which grows from the acceptance of the four decision-process criteria¹⁶ as requisites for the group decision-making process.

X.F. Summary: a new professionalism

The proposed approach and the frame of mind really combine to suggest a particular kind of professionalism for public servants. For, what does it mean to have an actor help us find features for enhancing a particular

¹⁴Manheim, Marvin L. Associate Professor in the Department of Civil Engineering, M.I.T., through M.I.T.'s Urban Systems Laboratory, is currently carrying out a research project for the State of California, Business and Transportation Agency, Department of Public Works, Division of Highways - aimed at implementing, among other features, the program of community interaction discussed in Chapters VIII and IX.

¹⁵i.e. in Watts-Willowbrook controversy of the Century Freeway...

¹⁶The four criteria (Understandability and believeability, Identification of applied values, Role of the group's cultural values, and Adaptability) are the subject of Chapter II.

alternative? The unspoken thrust of this entire recommended approach, which - maybe - ought not remain unspoken, is the dangerously non-professional, even anti-professional, idea that the professional actor cannot fulfill his function without the value-input from the lay actor. Note that this is not the same as saying that maximum lay participation is inherently good or that the professional cannot, to a considerable degree, simulate vicariously through the experience of empathy, what some of the lay actors' value input might be;¹⁷ it is saying, however, that the decision-making process, as well as the range of alternatives generated, has a lot to gain from the quality of the interaction between the agency and the public. The lay actor's perceptions not only constitute reality for him; they ought also to constitute reality for professionals in a public agency worthy of the name of public servants.

The professional in this role relies less on his "expertise" to generate solutions than on the resources, in the form of ideas, likes, and dislikes, which exist in the community, and he is ever conscious, even watchful, not to impose his sense of what is fair, just, and equitable -

¹⁷ While this approach has not been developed based on the belief that participation is inherently good, those who do hold that position will find comfort here ... "Of six different aspects which Riessman and Gartner see as the objectives which underlie the concept of community control, they identify community control "as a major lever for changing, redesigning and improving the human services..." - i.e. augmentation in response to the community's needs as the most important aspect. "It is in this area (of augmentation) that the community control movement can most substantially and immediately build a constituency, for here the movement directly affects the lives of people".

Riessman, Frank and Alan Gartner "Community Control and Radical Social Change", Social Policy, May/June, 1970.

easy and tempting that may be at times - but to bring the community's cultural values to bear. He respects these values by stimulating and helping - but essentially relying on - the conflict resolution mechanisms within the community's cultural values. All he really tries to do is to lubricate the workings of these mechanisms. To do this, he endeavors to make the process and the issues understandable to the man on the street and to make sure that the entire community of interests feels, even with the benefit of hindsight: 1) that the decision-making process was fair, just, and equitable, 2) that the public agency played the appropriate role, 3) that the decision-making process was based on assumptions that were as sound as was - at the time - feasible to develop, and 4) that the course of action chosen - from the point of view of each interest - was as good as was feasible.

This is a professionalism that plays down the professional's role as a "decision-maker" and emphasizes his function as a public servant to the rightful decision-makers, the community of potentially affected interests.

APPENDIX A

THE HIGHWAY LOCATION-DESIGN PROCESS IN FOUR CASES

CHAPTER XI: THE CENTURY FREEWAY IN GREATER LOS ANGELES, CALIFORNIA

CHAPTER XII: I-278 EXTENSION IN UNION COUNTY, NEW JERSEY

CHAPTER XIII: THE INNER BELT IN BOSTON, MASSACHUSETTS

CHAPTER XIV: BROOKLYN LINEAR CITY, BROOKLYN, NEW YORK

In this part, Appendix A, we have attached the case studies, Chapters XI - XIV, which were carried out by the author in 1969 and which constituted the raw material for Chapter VII.

Note that, while each time an abbreviation is introduced in these case studies, its full definition is first given; there is also an index of abbreviations at the end of each of these chapters.

CHAPTER XI

THE CENTURY FREEWAY IN GREATER LOS ANGELES, CALIFORNIA

XI.A. The Typical Highway Decision-Making Process in California

XI.A.1 Phase I: The Planning Process

XI.A.2 Phase II: The Design Process

XI.B. The Century Freeway: Sequence of Major Events

XI.C. The Airport Controversy

XI.D. Hawthorne's Opposition to the Highway

XI.E. Lynwood Alignment Issues

XI.F. Watts-Willowbrook Issues

XI.G. Downey Controversy

XI.H. Norwalk-Santa Fe Springs

XI.A. The Typical Highway Decision-Making Process in California

Because the process used by the Division of California Highways in determining highway locations is a good model for describing the location-design process of any highway agency's decision-making process, and thus should lend some insight into the other three cases discussed, it is useful to outline what the standard operating procedures of the California Division of Highways is.¹ There are four outstanding themes which have much to do with the quality of decisions that are made and, what may be equally important, with the public's perception of those decisions.

- 1) The highway experts gather data, develop alternative designs, and give advice, but the value-laden decisions are made by a group of unpaid laymen.
- 2) The public is encouraged to participate in the decision-making process as a matter of policy.
- 3) Each link of the state's freeway system is defined in the state legislation by as few controlpoints as possible, leaving the actual alignment as undetermined as possible.³

¹This section² draws on the California Division of Highways' memorandum on procedures² and on interviews with some of that agency's staff.

²California Division of Highways, "Procedures Used by the Dept. of Public Works and the California Highway Commission in Locating Freeways and in Preliminary Design", March, 1969.

³For example, the legislative description of the Century Freeway (formerly called Route 42, and later I-105) was:

"Route 42 is from Route 1 west of Inglewood to Route 605."

This particular description leaves the location decision wide open.

- 4) Each freeway the Highway Division begins to plan, has been made part of the state's freeway system by the state legislature before the location-design process starts.

In following a highway from the stage when it is a legislatively defined part of the State Highway System to its implementation we see it passing through a planning phase, taking from 1 1/2 to 4 1/2 years, and through a design and construction process taking 5 to 11 years.

The most important entity in the highway decision-making process is a seven member body of laymen, the California Highway Commission (CHC). The members are appointed by the Governor for staggered four-year terms. The members do not represent particular parts of the state but rather the state - and the public - at large.⁴ Each year the Commission elects one of its members chairman. The commission is responsible for three chief decision-making tasks of the highway planning and design process while carrying out the declared policies of the legislature:⁵

Routes 1 and 605 both are north-south highways while the freeway being defined, Route 42, is an east-west highway. Thus, not only the alignment of Route 42 was left undecided, but its termini were also not fixed. "West of Inglewood" leaves room for at least a couple of miles for anchoring Route 42 to Route 1.

⁴The Commission has traditionally been a non-partisan body; thus the political make-up of it has usually been one of members from the republican and democratic parties. During Governor Brown's time, for example, it was normally made up of four democrats and three republicans. Some Highway Division staffers now (1969) express concern over the fact that the commission's non-partisanship may be threatened because Governor Reagan has been appointing only republicans to it. While these staffers do not deny that highway decision-making is to a considerable degree a political matter, it is not thought to be a partisan, political matter.

⁵We are, in this case study, looking only at the last of these three tasks.

- 1) It may authorize the Division of Highways to perform preliminary studies to determine the advisability of adding additional highways to the State Highway System or to delete any parts from it.
- 2) It allocates funds which have been appropriated by the legislature for the implementation of highways which have been placed in the State Highway System by the legislature.
- 3) It makes the alignment choices for highways in the planning stage.

Ever since the establishment of a highway administration in 1895, then called the Bureau of Highways, California has had a body of appointed members making the most crucial highway decisions. The present form of a seven-member CHC was adopted in 1943.

XI.A.1 Phase I: The Planning Process

This phase of highway implementation has sixteen steps to it; however, since there are provisions of recycling through some of these, an actual planning project may experience being processed through many more than this minimum number of steps.

Planning Step 1: The new highway is added to the State Highway System, and it is assigned a priority.

The CHC authorizes the State Highway Engineer and his staff to investigate the desirability of adding a route to the State Highway System. The potential route's predicted traffic service, costs, contribution to

safety, and its ability to satisfy statutory controls - such as required minimum investments in a given district or county - are considered.

After the State Highway Engineer has made his recommendation to the CHC, the Commission may propose a change in the State Highway System. It may, for example, advocate the addition of a particular link from point A to point B. As the legislature makes its annual review of the Highway System, it considers the CHC's recommendation and, if it accepts the Commission's advice, includes the recommended highway link from point A to point B in the updated definition of the State Highway System. The CHC now has to assign a priority to the new highway, determined by its importance vis-a-vis:

- 1) all other highways which are part of the authorized system, and
- 2) their expected relative contributions to satisfying the traffic needs.

The priority determines the implementation schedule for the highway; the phase of implementation commences with the establishment of project limits.

Planning Step 2: Project limits are determined.

As the time approaches at which the previously determined priority of highways has become the highest in the remaining State Highway System, Division of Highway personnel consult with local officials to find desirable project limits. The entire highway linking points A and B is divided into projects usually a few miles in length. The criteria for establishing project limits are:

- 1) administrative manageability,

- 2) fiscal feasibility,
- 3) compatibility with traffic flow.

This makes it possible to build the highway in manageable segments of a few miles each. The highway from A to B may thus, for example, be divided into a project from A to A1 and a project from A1 to B.

Planning Step 3: Local governments and agencies are notified.

Before the Division of Highways' staff in the district office in whose jurisdiction the new highway falls starts to do any planning of one of the highway's segments, it notifies, in writing, all municipal, county, state, and federal agencies, local governments, and special districts that might conceivably be interested - of the fact that the Division of Highways is about to start planning a route for the particular segment in question.⁶ For the benefit of the general public, similar

⁶The Division of Highways maintains two lists, one of all parties who must be notified, and, in addition, a list of parties which the local Division Engineer has the option to notify.

Mandatory Notifications:

- County Board of Supervisors of all counties that the highway enters
- City Councils of every municipality the highway enters
- State Legislators whose districts the highway enters
- State Lands Commission
- Department of Conservation
- Department of Parks and Recreation
- Division of Aeronautics
- Department of Harbors and Watercraft
- Department of Agriculture
- Department of Water Resources
- State Office of Planning
- State Cemetery Board
- District Airport Engineer, Federal Aviation Agency (San Francisco and Los Angeles)
- Airport Managers of all area airports
- Advisory Committee on a Master Plan for State Scenic Highways (Scenic Highways only)

announcements are placed in the local newspapers. At least one preliminary meeting is held at which all interested parties are informed of the process by which the highway will be planned and designed. The local actors are encouraged to prepare their points of view so that they can make their plans, preferences, priorities, likes and dislikes known once the actual planning gets under way.

Planning Step 4: Engineering and community impact data are assembled.

The Division of Highways staff tries to generate all feasible alter-

Water Quality Control Boards
 State College System
 University of California System
 Urban Transportation Planning Study Policy Coordinating Committees
 Urban Transportation Planning Study Technical Coordinating
 Committees
 Areawide Review Agencies
 Air Pollution Control Agencies
 Department of Housing and Urban Development (HUD)
 Bureau of Outdoor Recreation (Department of the Interior)
 Federal Water Pollution Control Administration

Optional notifications:

U.S. Congressmen whose district the highway enters
 National Park Service
 U.S. Forest Service
 U.S. Bureau of Reclamation
 U.S. Conservation Service
 U.S. Corps of Engineers
 U.S. Bureau of Public Roads
 Utility Companies
 Public Utilities Commission (Railroad Crossings)
 Water Districts
 Fire Districts
 School Districts
 Railroads
 Bureau of Indian Affairs
 Transit Agencies
 Local Chambers of Commerce
 Port Authorities
 Technical staffs of local agencies
 State Architect
 Community and Civic Organizations

native highway corridors - a corridor being an approximate alignment - and it assesses the measurable impacts of the highway in each of these alignments. In the alternative generation stage there is frequent contact between the many local officials and the Highway Division staff; many of the alternative alignments, in fact, are proposed by these local actors. It is attempted to keep the data that is assembled for each alternative as value-free as possible.⁷ This phase of the planning process is normally expected to take one to three years. During this period the planning staff of the District office avails itself to speak at any meetings they are invited to attend. Because it is believed at the policy-making level of the Division of Highways that the public is in a

⁷The alternative alignments usually are identified by a color scheme. Each segment considered in the whole project is assigned a color - and in the case of particularly complex criss-crossing of alternatives, a color and number combination - such that every possible path through the web of alternative alignments can be described by a unique sequence of color, or color and number, labels.

Typically, the data collected for each alternative consists of:

- 1) length of the highway
- 2) cost in \$ (construction, right-of way)
- 3) traffic data (20-year user-benefit (in \$), benefit-cost ratio)
- 4) land parcels affected (single family, multiple family, industrial, commercial, vacant, parks, schools, churches, oil wells, and miscellaneous)
- 5) living units affected (single family, multiple family)
- 6) effect on the various municipalities' tax rolls

These last two sets of data are collected on an absolute as well as on a relative basis. If the data were presented in absolute terms only, it would imply the value-judgment that, for instance, loss of x \$ on one municipality's tax rolls is directly comparable to the loss of x \$ tax base in another municipality. The same goes for the displacement of dwelling units, families, etc.

better position to assess the socio-economic impacts of the highway than the professional highway engineer is - provided the public is well informed -, it is also considered essential that the public have no misconceptions about the highway planning and its own role in it.

Planning Step 5: The data is reviewed.

When the District Engineer feels that all of the feasible alternatives have been investigated and the impacts of each one are fairly well known, the data on all of the alternatives that have not been ruled out as being completely infeasible, are submitted to the State Highway Engineer for review. This step is an internal matter to the Division of Highways. While the local actors are kept well informed about the various alternatives that are being studied, the impact predictions for each one are only made public after headquarters, i.e. the State Highway Engineer, has checked the alternatives and data generated by the District. This is the first of several stages at which the District Engineer may be directed to begin studying one or more additional alternatives. In that event, the process - at least as far as the new alternative is concerned - returns to step #4. Once the State Highway Engineer has approved the alternatives and the sets of data generated, the District is authorized to make all of this information public.

Planning Step 6: "Final staff meeting" is held, and a public hearing is announced.

Next, all local officials and other participants who have either been directly involved in the working out of the alternatives or have

since then expressed an interest are invited to a "final staff meeting". The term "staff" refers here to the fact that the staff of the political actors, e.g. city engineers, city managers, planning directors, rather than the political actors themselves, are the ones who usually attend this meeting. It is a dress rehearsal of a public hearing which will be held about one month later. Knowing thus precisely what the Division of Highways' presentation will contain, it affords these actors the opportunity to prepare themselves for whatever stand they will want to take at the public hearing.

The final staff meeting also serves the purpose to afford these local actors still another chance to provide an input to the highway engineers' work. Even though there has presumably been much previous discussion concerning feasible alternative alignments, the local actors have not seen a presentation of the entire package of alternatives and data before. They may therefore propose that the Division of Highways investigate one or more additional alternatives which have merit, appear feasible, and have been overlooked thus far. This work step, then, serves as the second point from which the process may return to step #4.

A third function served by the final staff meeting is the elimination of a dominated alternative. If one or more alternatives is still in the package which every actor, including the Division of Highways, finds inferior to some other alternative, such an alternative is eliminated.⁸

⁸It might appear that this could be a way of influencing the final choice very unfairly. Since the entire interested public is not present at the final staff meeting some alternative might be eliminated which is preferred by some significant but unrepresented part of the public. How-

Provided the local actors participating in the final staff meeting do not ask the Division of Highways to return to step #4, arrangements are made to hold a public hearing.

Planning Step 7: Public Hearing is announced.

The purpose of a public hearing is not so much to inform the public as it is to get the public's reactions. For this to take place it is necessary that the public is well informed before the hearing. Because of this, the public hearing is well advertised at least a month ahead of time. Maps of the alternative alignments under consideration and oblique aerial photographs of neighborhoods with the proposed highway alternatives added by a touch-up method are published in the local newspapers. Every city hall as well as other community centers, sometimes banks who tend to have big, empty show-windows, are provided with large displays of the material which will be presented at the public hearing and are asked to display the material in the meantime. Each actor who is in contact with the Division of Highways' District planning office at this stage - e.g. civic groups, all municipal administrators, etc. - are also provided with the comparative data developed for each of the alternatives.

Invariably, some actors feel very strongly for or against one or more of the alternatives, and they will want to prepare a presentation to

ever, since there still are a number of points at which the Division of Highways can be asked to return to step #4 after the public has been rather well informed, the elimination of some alternative at a pre-public hearing date is less manipulative than helpful. Anyone has great difficulty comparing more than a handful of alternatives; thus, the Division of Highways likes to keep the number of alternatives down to below ten.

make their point at the public hearing. If the Division of Highways has information which these actors need in their own presentations, the advertisement of the public hearing notifies them of where the various public displays are and how they can get in touch with the planning staff of the Division of Highways to provide them with any additional information.

Planning Step 8A: A public hearing is held.

Even though held in the daytime, a public hearing usually has an attendance of at least 1,000 people. The Division of Highways provides a handout consisting of 1) a 8 1/2 by 11 map with the several alternatives studied shown in different colors, 2) a set of three comparative tables of data describing the predicted impacts of each of the alternatives, and 3) a prose statement explaining the decision-making process which has taken place and the process which is yet to follow.

As the first item on the agenda, the Division of Highways presents the alternatives they have studied and their respective impacts without any expression of preference. Next, each of the municipalities affected by the highway makes a presentation of its preferences. Each city may put a sequence of speakers on the stand and have its own consulting highway engineer to argue that some of the alternatives proposed are particularly undesirable (or desirable, as the case may be) and would cause them severe hardship.

After the cities, all other governmental jurisdictions who are affected make their presentations. Finally any group, institution, organization, or individual has a chance to do the same.

Planning Step 8B: The public hearing record remains open.

After the public hearing is over, its record remains open for at least ten days - usually thirty days - for any additional statements, letters, petitions, or reports that anyone cares to make.

Planning Step 9: A record of the public hearing is prepared.

The purpose of the public hearing is to bring out and record the public's reactions to each of the alternatives proposed. The CHC considers these reactions data which are essential, - along with the comparative statistical data generated by the Division of Highways -, to make a choice among the alternative alignments. Therefore, the public's reactions are recorded raw, without editing, in order that they may be treated as data from then on.

At the end of the period during which the record of the public hearing is held open, a written report containing the attendance record of all officials, the entire minutes of the meeting, all hand-outs, displays, statements, petitions, and reports filed during, as well as after, the public hearing is prepared. It is distributed to all officials of cities and civic groups who took part in the hearing. Copies of it are also submitted to the CHC and to the State Highway Engineer. Such a report often consists of two or three volumes, adding up to several hundred pages.

If the public hearing has brought out additional alternatives which appear to have some merits but which have not been investigated thus far, the Division of Highways' district staff may decide - or be asked by the

State Highway Engineer - to return to step #4. If the additional alternative does in fact then turn out to have enough merit to put it alongside the other alternatives, another public hearing has to be held to elicit the public's reactions to the new, enlarged set of alternatives.

Planning Step 10: The District Office makes its recommendation to the State Highway Engineer.

The District Engineer summarizes the data, consisting of statistics and public reactions for each of the alternative alignments. He then either ranks the alternatives into what he judges should be the 1st, 2nd, 3rd, etc. choices - or, he picks just one of them out as his recommended first choice.

This is in effect the District Engineer reporting to his superior. It is an internal communication; its content is not made public.

Planning Step 11: The State Highway Engineer makes his recommendation to the Director of Public Works.

Based on all of the data produced, including the District Engineer's recommendation, the State Highway Engineer, with the help of the headquarters staff, makes his own choice of a preferred alternative and prepares a report to justify his choice. Unlike the District Engineer's recommendation, this is a formal decision, and the report is distributed to all the official local actors.

Planning Step 12: The Director of Public Works makes his recommendation to the California Highway Commission.

In the past, this step has only been a formality. The State Highway Engineer's recommendation has, for all intents and purposes, gone directly to the CHC. The step does, however, exist, and the Director of Public Works is free to exercise his prerogative and make his own recommendation.

The Director of Public Works asks for the advice of the State Office of Planning and invites comments from other State Agencies to help him consider the socio-economic effects of the various alignments. He is also thought to have a finger on the political pulse. The Public Works Director's recommendation of a first choice is then submitted along with, rather than instead of, the State Highway Engineer's recommendation to the CHC.

Planning Step 13A: California Highway Commission makes resolution of intention.

Once the CHC has received the recommendations of the Director of Public Works and the State Highway Engineer, and also has the record of the public hearing, it declares its intention of making the alignment decision. During the following thirty days any local officials may ask for a public hearing held by the CHC. This is sure to happen if some local actors are unhappy about the routes recommended by the State Highway Engineer and/or the Public Works Director. On the other hand, local actors who want it made known that they are quite happy with the recommendations, and who would like the actual making of a choice by the CHC

delayed as little as possible, usually adopt a formal resolution asking the CHC to waive the CHC public hearing. If the representative of any municipality or if any other official local actor asks for a hearing, the CHC has to hold one. If no official actor has asked for a hearing but there may be informal local actors, such as neighborhood associations, who find the recommendations made to the CHC controversial, the CHC may schedule a public hearing on its own initiative.

Planning Step 13B: CHC holds public hearing.

The CHC public hearing, if held, is again well advertised at least one month in advance. The agenda of the meeting and the subsequent thorough recording of the entire hearing and statements submitted during the period after the hearing - while the record is held open - is much the same as in the case of the public hearing held by the District Office of the Division of Highways. The chief exception is that besides presenting all alternatives, the State Highway Engineer also presents his recommendation and his reasoning behind it. The local actors, of course, gear their own presentations very much to either opposing or supporting that recommendation.

This hearing is still another point at which the Division of Highways may be directed to return to step #4 - this time on the advice of the CHC.

Planning Step 14A: CHC adopts an alignment.

At one of its subsequent, regular meetings, normally within eight months of making the declaration of intention, the CHC chooses one of

the alternative alignments.

Any actor who asks the CHC to reopen the highway alignment decision - be he an individual actor or be he the State Legislature - has to convince the CHC that some matters which played an important role in making the choice have changed. Unless new, substantial information is brought to light, the CHC's decision is final. The CHC writes a report explaining its reasons for making the choice of the particular alternative alignment; this document is published and is available to all official public actors.

Planning Step 14B: CHC holds second public hearing.

Provided the information - on the basis of which the alignment was adopted by the CHC - has changed sufficiently, the CHC schedules its second public hearing. This is tantamount to returning to step #13B.

Planning Step 15: The Division of Highways asks for federal approval of the route adopted by the CHC.

Most highways in the California Highway Ssystem obtain federal financing of one kind or another. Even if it is not anticipated that the highway in question will ever use any federal moneys, the Division of Highways likes to obtain approval from the Bureau of Public Raods (BPR). The reason for this is not that they are gluttons for red tape but rather the realization that in the intervening years between route adoption and completion of the highway some federal financing program which they will want to take advantage of may well come into existence. In that eventuality it will be important that the highway in question qualifies by

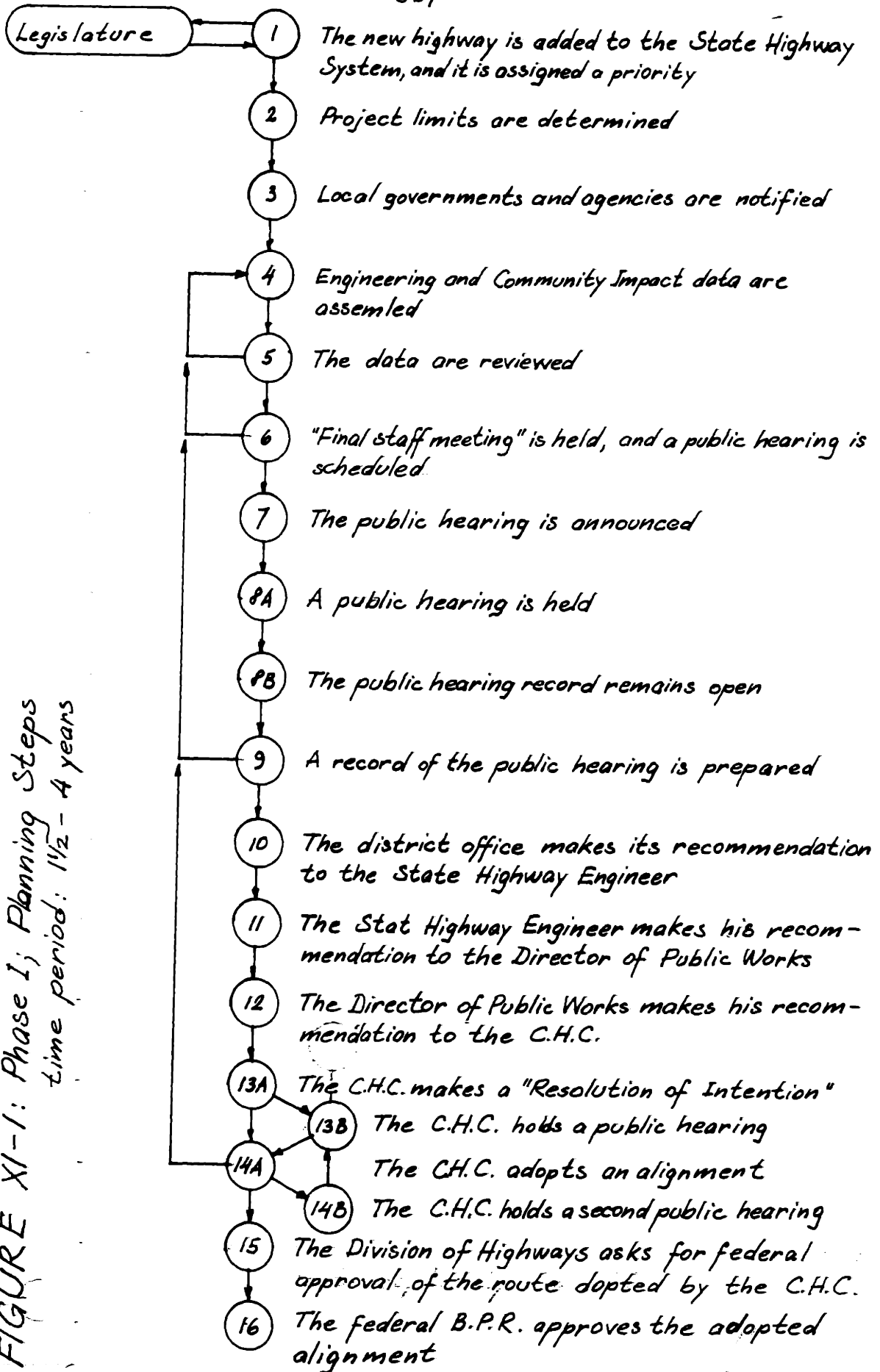


FIGURE XI-1: Phase I; Planning Steps
time period: 1 1/2 - 4 years

meeting all of BPR's requirements. It is this foresight which makes the submission of an adopted highway alignment to the BPR a standard procedure.

The BPR uses not only minimum design standards as criteria for judging the acceptability of a highway but also takes an interest in how the alignment decisions were made; to do this, the Division of Highways submits all of its data which, by this time, consist of:

- engineering data on all of the alternatives considered,
- comparative community impact data produced by the Division of Highways,
- the record of the Highway Division's public hearing,
- the recommendation of the State Highway Engineer and his justifying report,
- the recommendation of the Director of Public Works,
- the record of the CHC's public hearing (or hearings),
- the CHC's decision and its report justifying that choice.

Planning Step 16: BPR approves the adopted alignment.

Normally, federal approval is forthcoming in the rather short period of one to two months.

XI.A.2 Phase II: The Design Process

This phase of highway implementation, starting after the federal BPR's approval of the CHC's adopted route and ending with the opening

of the highway to traffic, takes normally five to eleven years. At this writing, summer 1969, the design procedure is undergoing some changes in order to incorporate a design-hearing as required by the BPR since January 1969. Because this outline of the California Highway Division's standard decision-making process is given more for the purpose of better understanding the Century Freeway case than as a study in and of itself, we shall look at the design process before a design hearing was incorporated, and we shall then look where the design hearing is being programmed into the process. The old design process had eleven discernible steps to it, with one possibility for recycling; the new one adds three steps with an additional possibility for recycling.

Design Step 1: Preliminary design studies are made.

While the design phase is usually carried out by a different team of engineers from the team that carried out the planning phase, an effort is made to minimize any possible discontinuity in the established relations between the local actors and the Highway Division staff. There is a maximum of contact during this step between the two kinds of actors.

During this step the specific alignment is negotiated between the Division of Highways and the local actors; often the negotiation process is more between different local actors with the Highway Division staff playing the role of technical advisors. The negotiations are about design features such as:

- amount and kind of compensation for displaced people
- elevated vs. depressed highway
- number and location of ramps

- precise alignment; e.g. dislocating a particular building vs. going around it, etc.
- making provisions for future rapid transit, etc.

While this step is carried out in more of a negotiations environment than any of the steps during the planning phase, the same philosophy of developing a number of alternatives is followed where possible.

Design Step 2: Execution of "Symbol Freeway Agreements".

Section 100.2 of the Street and Highway Code of California requires that written approval of a municipality's or county's government be obtained before the Division of Highways can make any permanent changes in that jurisdiction's street pattern. Since a new highway through a city invariably requires the closing of some streets, and the constructing and connecting of ramps constitutes a change in the local street pattern in itself, each municipality and county government has, for all practical purposes, the veto power over the location and design features of the highway.⁹ The community's approval of the design is termed the "Freeway Agreement" and is usually carried out in two stages, a "Symbol Freeway Agreement" and a later, final, and more detailed "Freeway Agreement".

Once the Highway Division staff has reached enough of an understanding with all the municipal and county governments, a Symbol Freeway Agreement is executed. This agreement, rather than showing such elements as ramps with precise widths and turning radii, shows the location and

⁹It is this provision of the law which makes for the negotiation environment during the early steps of the design phase.

type of interchanges and ramps by use of symbols. The understanding of the two parties to the contract, i.e. the Division of Highways and the particular municipality, is that

- 1) the highway design, as represented by the symbols, is acceptable to both parties, and
- 2) the design features, as represented by symbols, have not yet been worked out but that they can be detailed to everyone's satisfaction.

Design Step 3: Headquarters approval of basic design features is sought.

The District Engineer submits a basic design report to the State Highway Engineer for approval. At this point, the design process may be recycled. If the State Highway Engineer requests that the District Office staff search for additional design solutions to particular problems, the process returns to design step #1.

Design Step 4: BPR approval of basic design features is sought.

Just as with the highway alignment, so with the highway design features - the Division of Highways seeks to get BPR endorsement whether federal funding is anticipated or not.

In the case of the new procedure involving a design hearing, the presentation of the Division of Highways to the BPR will, of course, include a report of the design public hearing.

Design Step 5: Freeway agreements are negotiated.

As the design is being carried to successively more detailed levels,

a final Freeway Agreement has to be worked out with each local government.

It is somewhat forced to present the continuing process of negotiation and design in the form of four clear steps - as I have done here.

The complications are threefold:

- 1) Just how meaningful an understanding between the District Office staff and one municipality is depends in part on the progress and the coordination of the negotiations that are being carried out in the two adjoining municipalities.
- 2) The District Office staff does not have final authority and really has to check each major change in design feature with headquarters, rather than getting just a one-time approval as step #3 suggests.
- 3) Approval of a design feature by the State Highway Engineer often constitutes just one move in a sequence of many moves in the negotiation process between the Highway Division staff and the local actors.

Design Steps 6 through 10:

It is important to note that the design process cannot very well get beyond step #6, the execution of freeway agreements, until that step is successfully completed. Working on design details prematurely could not only turn out to be a waste of time when the design features are finally negotiated with the local actors, it would also be looked upon by these local actors as a sign that the Highway Division is not negotiating in good faith, that, in fact, it has a specific design in mind. A further consideration against working prematurely on detailed designs is that the

Highway Division's spending of resources on these details would tend to make it increasingly more difficult for them to partake in the normal give and take of negotiations as they became more and more committed to the particular alternative by their very investment of man-hours in it.

The Division of Highways is prevented by law to enter into right-of-way appraisal and acquisition (steps #7 and 8) before the Freeway Agreement for an area is signed.

Design Step 6: Preparation of design drawings and other contract documents.

Detailed design drawings are executed and other construction contract documents are prepared.

Design Step 7: Right-of-way properties are appraised.¹⁰

While the Division of Highways can normally not go into steps #6 and 7 in the absence of a Freeway Agreement, there are two exceptions to this rule. The exceptions are termed "hardship" and "protection" and allow the Division staff to appraise property and acquire it (step 8).

hardship

If there is reasonable certainty that the highway will take a

¹⁰Some of the most notable innovations that have been introduced in the area of compensating and relocating people who live in a highway's right-of-way which have come about in the immediate past, were made by the California Division of Highways in the instance of the Century Freeway. However, as far-reaching and lasting as the effects of these innovations are sure to be, for the time being they cannot be considered part of (even) the California Division of Highways standard procedure. The concept of providing a replacement home to a family which is at least as good as their old one was, no matter what the cost, is still an exception rather than the rule. (See XI.F: "Watts-Willowbrook Issues".)

particular house, and the owner of that house will experience severe hardship if he has to hold onto the property until the city and the Division of Highways have come to terms and have signed a Freeway Agreement, the Division of Highways may buy the house.¹¹

protection

If 1) the highway is anticipated to go through relatively undeveloped real estate, 2) the Division of Highways cannot purchase this undeveloped real estate yet because it is still negotiating for a Freeway Agreement, and 3) a developer is about to make a major improvement to the property, then the protection clause gives the Division of Highways the right to buy the real estate before that improvement is made. In other words, it is the low acquisition price which is being protected. This clause is not invoked to prevent paying the normal increase in property values as they occur during a sometimes long-drawn design phase.¹²

¹¹This provision is standard procedure in the highway agencies of most states. An example of an instance where the principle could be applied would be the case of a retired couple where one of the partners dies. The widowed partner may want to move out to live with married children either because he does not want to, or can't, keep the house. Since the highway is scheduled to come through there, he cannot sell his house, and yet, the absence of a Freeway Agreement keeps the Division of Highways from buying it from him at this time.

¹²The case of a presently vacant piece of land in the anticipated right-of-way which was being considered as the site for a new industrial building by some developer, would be an eligible case in point where the protection clause could be used.

The Division of Highways tries to make minimum use of these exceptions for two reasons:

- 1) Owning and managing real estate in the right-of-way of a highway which is still some years from construction ties up large amounts of money.
- 2) The city with which the Division of Highways is negotiating the Freeway Agreement can charge that the Division of Highways is using the hardship and protection provisions to create the sentiment among the local population that the highway is already moving in, that the highway's coming is inevitable. Extensive use of the exceptions, in other words, makes the city's charge credible that the Division of Highways is not bargaining in good faith.

Design Step 8: Right-of-way properties are acquired.

As was mentioned above, the California Division of Highways prefers not to own housing longer than it needs to. It has nevertheless adopted a policy of acquiring houses in a highway's right-of-way as they become available so that a very minimum has to be taken by eminent domain in the end.

Design Step 9: Right-of-way is cleared and utilities are relocated.

Until recently the Division of Highways demolished the isolated houses it acquired relatively early in a right-of-way. Because this policy did not work well at all,¹³ the Division now rents these houses

¹³The demolition costs of isolated buildings is much higher than if an entire right-of-way area is leveled at the same time. The demolition of

out until it owns all the property in the area and can demolish it all at once.

Design Step 10: The highway is constructed.

Design Step 11: The highway is opened to traffic.

Changes in the Design Phase

The changes described below have been incorporated into the design-decision-making process to satisfy the new federal requirements, i.e. they have been imposed from the outside, and the Highway Division staff has mixed feelings about their likely effect.

The old design-decision-making process is one of negotiation between the Division of Highways and the local governments. Under the new procedure the local political actors may be forced into somewhat more polarized positions by their constituencies because:

- 1) All actors hold that - no matter how beneficial the total expected impact of a highway on a municipality - locally, it is sure to be disruptive.
- 2) The people who are expected to attend design public hearings are expected to be predominantly residents in the immediate right-of-way of the adopted route rather than the somewhat broader public which played a role in the planning phase public hearings.

The ability for the municipal officials to negotiate effectively may

isolated buildings also worked a hardship on the remaining residents - making the area an undesirable place to live in the interim and generally creating ill will.

thus be impaired. The Division of Highways fears that all local officials may be forced to take public stands, against their will, from which they will not be able to retreat without suffering unacceptable political costs.

While the new federal requirement for a design hearing may bring the highway decision-making in most states closer to the process which has been used by the California Division of Highways for some time, i.e. make the processes more responsive to the local needs, it may have a disfunctional effect in California. On the one hand, the Division of Highways still has to satisfy Section 100.2 of their Streets and Highway Code, which demands that all design features be negotiated. On the other hand, the new requirement puts the local officials into a situation where they may be unable to negotiate.

Design Step 1A: Preliminary design studies are made.

(as above described Design Step #1)

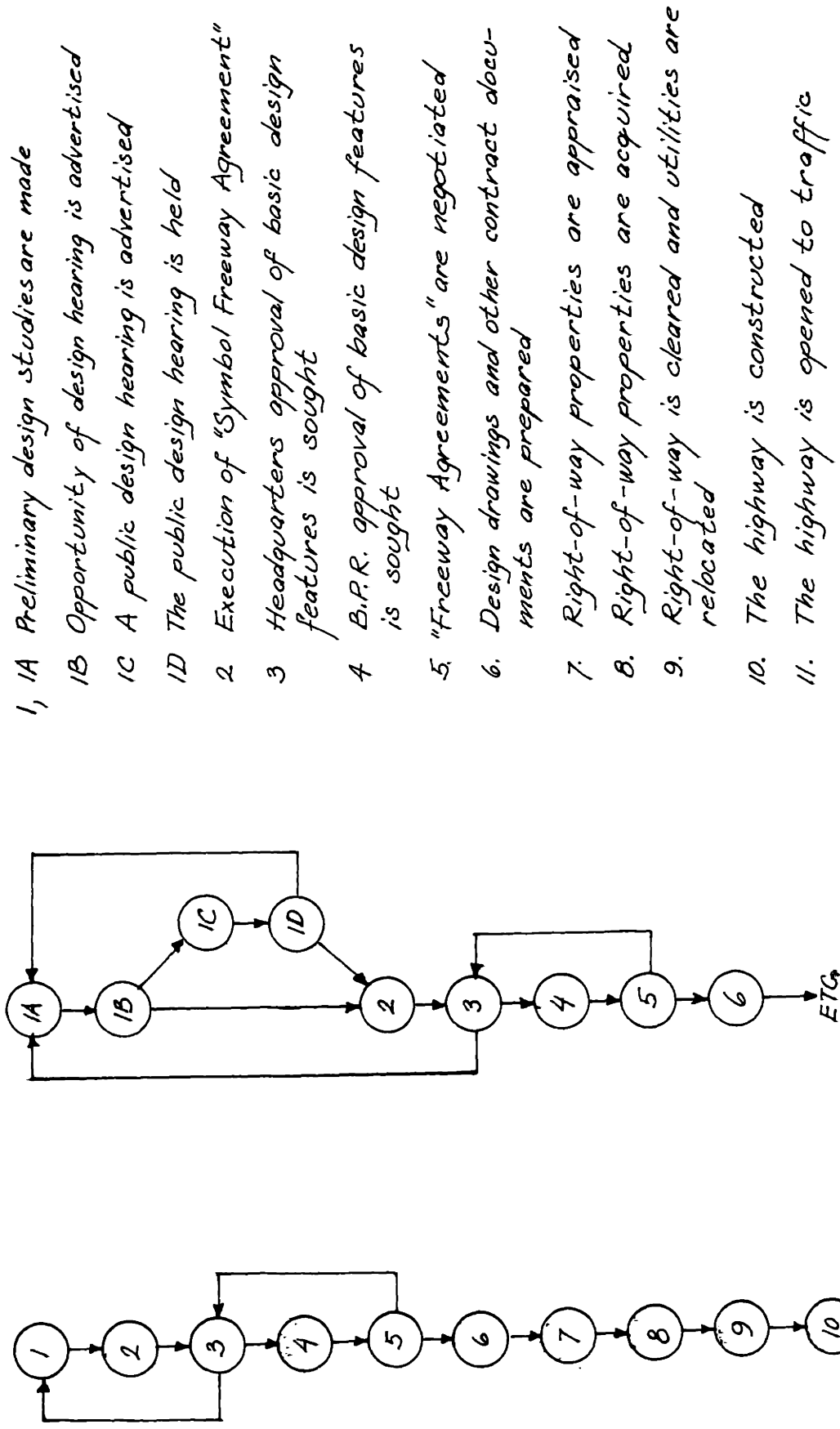
Design Step 1B: Opportunity of design hearing is advertised.

After a number of alternative combinations of design features have been developed by the District Office design staff, and the municipal governments' preferences have been explored, - but before the Highway Division staff is committed to any alternative design -, requests for a public design hearing are solicited from the public. If no request is forthcoming, the process moves to step #2, otherwise, to step #1C.

Design Step 1C: A public design hearing is advertised.

The hearing is advertised at least one month ahead of its occurrence.

FIGURE XI-2: Phase II; Design Process, -with & without a design hearing time period: 5-11 years



As during the planning phase, the alternative design features are brought to the public's attention well before the hearing by publication in local papers and displays set up at community centers and city halls.

Design Step 1D: Public design hearing is held.

Like in the case of other Highway Division public hearings, the alternatives and their respective costs and other expected impacts are discussed by the Highway Division staff without expression of preference. Local actors are then given the opportunity to make presentations of their own to express their own objections or preferences for particular features, or to suggest still other alternatives. One of the possible results of this public hearing is that the Division of Highways staff may return to step #1A and work out some of the newly proposed alternative design features.

The record of the public hearing is held open for at least ten days after the hearing. At that time a complete report of the hearing and the subsequently submitted petitions, statements, and comments is distributed to all official actors.

The remaining design steps are virtually the same as those outlined in the old design process; i.e. steps #2 through #11 follow above.

XI.B. The Century Freeway: Sequence of Major Events

One of the links in California's master plan for Highways, the California Highway System, was defined as "Route 42¹⁴, (running from)

¹⁴The highway in question has since been labelled with a succession of numbers. Because it was seen as a replacement of Routes 174 and 2, it

Route 1 west of Ingelwood to Route 605".¹⁵ (See figure XI-3.) The Century Freeway was planned in two stages. Planning the first of these stages, constituting roughly the western half of the total 17-mile highway, began in 1958; the second stage did not enter the planning phase until 1963.

We can thus follow these two highway segments in their progress through their respective planning phases lasting for the first stage from 1958 through 1965, and, for the second stage, from 1963 through 1968. At the conclusion of the planning phase each of the highway segments was turned over to different personnel in the Division of Highways' District office as it entered the design phase. Several controversies developed during the planning process. In this outline of major events these controversies will be identified and put into the whole decision-making process' sequence of issues. Beginning with section C of this chapter, each of the controversies is studied in some detail.

was in the early years of its planning referred to as Route 174; by the mid 1960's State Route 42 was the correct name. In 1968 it became part of the interstate system, and it received an appropriate three digit I-number: I-105. While the highway's number has kept changing, it has not been incorrect to call it the Century Freeway during any of the periods covered by this inquiry.

¹⁵This is the way the link is actually described in State Highway Engineer's report to the CHC.

Dept. of Public Works, Division of Highways, State Highway Engineer J. A. Legarra, Report of Route Studies Relative to the Freeway Location of Route 42 in Los Angeles County between Central Avenue and Route 605, September, 1967.

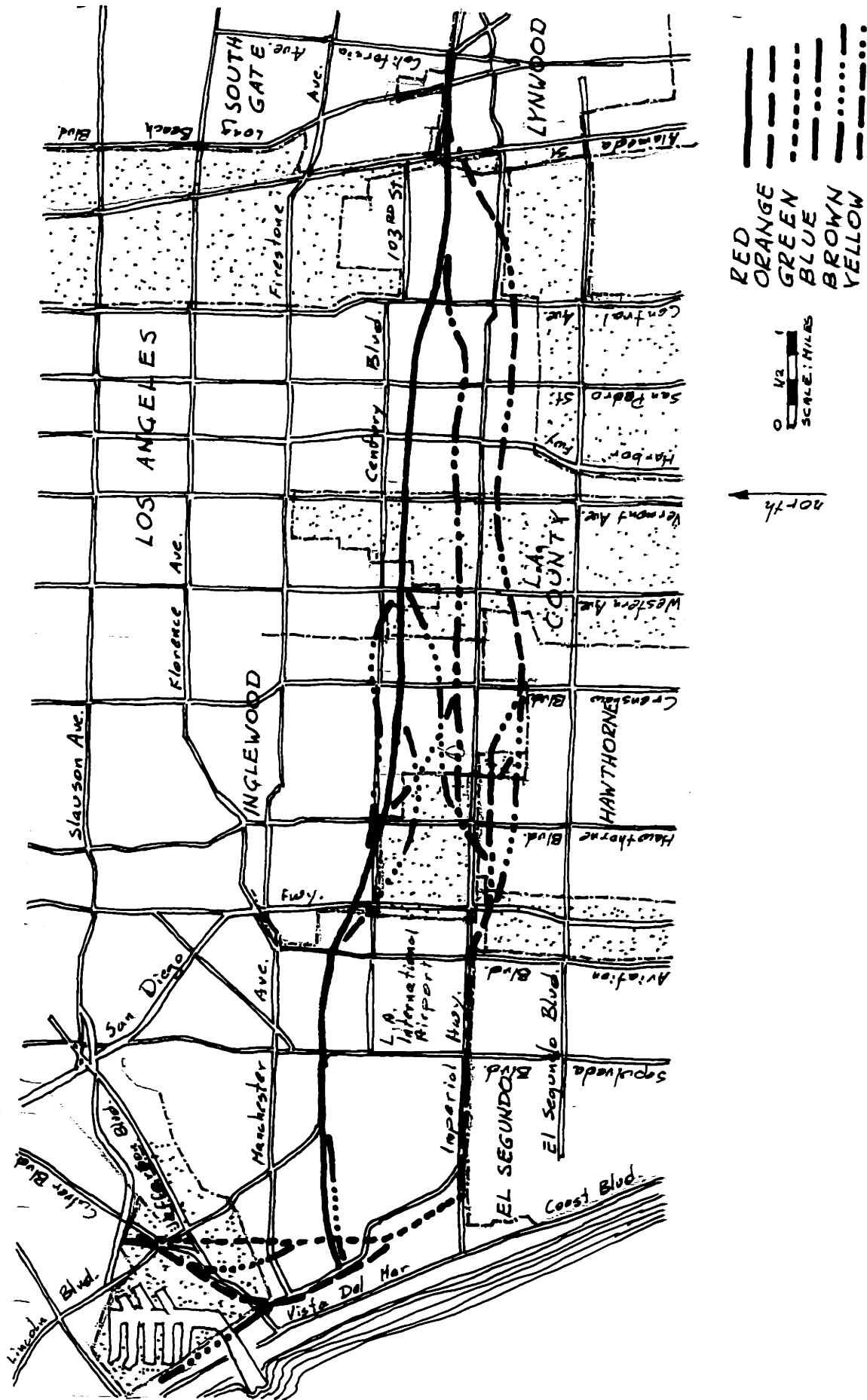


FIGURE XI-4: Western Half of the Century Freeway

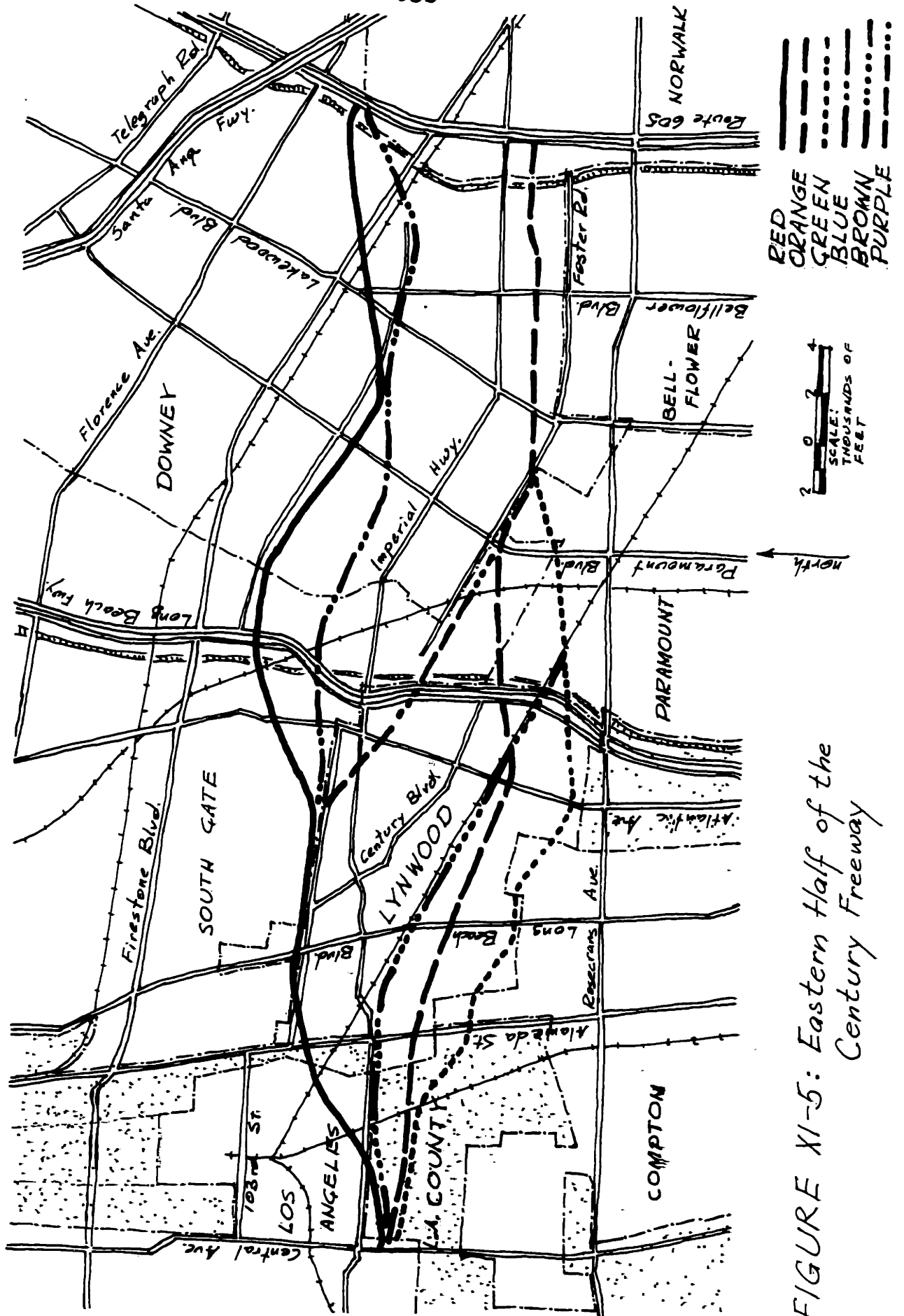


FIGURE XI-5: Eastern Half of the Century Freeway

The CHC authorized the Division of Highways to start planning Century Freeway in November 1958.

On December 10, 1958, the Los Angeles District staff formally notified the municipalities¹⁶ as well as the County of Los Angeles, of the fact that the Division was about to start preliminary alignment planning on the freeway.

The several local papers carried stories of the fact that the Century Freeway planning was getting under way, and a number of people immediately called, or wrote, to the District Office to ask whether their houses would be taken - and if so, when. From that date on, the planning and design staff of the District Office began talking and writing about the normal steps that are taken in their typical planning and design process, what tasks are accomplished in each, and about how long these things normally take. And, they began telling the people who wanted to know whether their houses would be taken that, since the Division of Highways was about to start the planning phase, it would be only after years of gathering data, making proposals, and consulting with all the local interested parties that the kind of questions they were asking could be answered.

During 1959, officials of the cities located in the anticipated corridor of the Century Freeway formed the Century Freeway Association, an organization to discuss the problems of the highway and to provide an early input to the Division of Highways route studies. By early 1960 the Association felt it had invented a tactic which would give the Asso-

¹⁶The following cities were notified: Los Angeles, South Gate, Downey, Inglewood, and Norwalk. Other municipalities became involved later as

ciation virtually complete control over the location decision-making. Oddly enough, this attempted power-grab was aimed at usurping potential powers of the public rather than powers of the Division of Highways; the attempt failed because the Division of Highways refused to cooperate and insisted on also hearing the opinions of other groups.

The Highway Division staff continued to meet with the Association, but preferring to try its hand at subterfuge over carrying out a more public-minded mission, the Association never played a very constructive role.

The airport controversy; 1960-65

Because the definition of the Century Freeway in the State Highway System left open the alignment as well as the precise location of the termini, the Airport Department of the City of Los Angeles, as well as a number of other actors, saw it in their interest in participating in the alignment decision-making for the highway's western terminus. We can identify three major issues in the controversy, each having its respective set of actors.

- 1) The most fundamental of these issues dealt with the ground traffic needs of the airport and the Century Freeway's potential in satisfying these needs.
- 2) The airport operator, its users, and many of the residents living under the aircrafts' flight path felt that the highway could - and should - be located to displace as many people living

additional alignments were added and as some of these alignments went through additional political jurisdictions.

under the aircrafts' approach pattern as was feasible. These were people who begged for the road to come their way and displace them.

- 3) A number of municipalities and industrial actors realized that, while they were not directly interested in the airport controversy, its outcome would affect them. They therefore took sides in the airport controversy, arguing issues in which they had no direct interest.

From November 1958 to January 1963 the Division of Highways, in accordance with its standard procedures, generated alternative alignment bands and developed data to compare them. By October 1962 the District Office had submitted a number of these alternatives for tentative approval by the Division's headquarters so that they could be investigated further. In all, the staff investigated 16 alternatives.

Establishment of the first stage project limit

While the first project established only the alignment of the western half of the Century Freeway, that project's eastern terminus was, of course, sure to fix the alignment of the 2nd stage's western-most part.

The project limit which was first proposed was at California Avenue. (See figure XI-3.) This made the 1st stage the larger of the two stages; it made up better than ten of the total seventeen miles length. More importantly, however, all the alternatives ever proposed for the western portion converged to one single, northerly alignment at the California Avenue terminus. Some of the municipalities which were to be impacted by the Century Freeway's second stage realized that some options, -

chiefly the option of getting a southerly alignment by following through with the Yellow-5-Yellow alignment of the first stage -, could best be kept open if the project limit were moved back to Central Avenue.

The actors who felt they could only gain by the proposed change of the project limit took the initiative and argued their case successfully. While their move did not cause any great controversy, it proved to have been a very strategic one for the 2nd stage alignment issues.

On January 23, 1963, the Final Staff Meeting,¹⁷ by the Division of Highways was attended by 45 officials from the communities. The list of alignments was reduced to six routes by eliminating the alternatives which were dominated.

The Division of Highways held a public hearing attended by approximately 2000 people, June 5, 1963. By August 22, 1963, the record of the public hearing was published, in three volumes, and distributed to all official actors who had participated.

Hawthorne's opposition to the highway, 1963 - 1969

The city of Hawthorne, lying directly south of Inglewood, would not have been affected by the earliest alignment alternatives studied. However, as some new ideas were explored for designing the transportation around the Los Angeles International Airport, some alternatives came under study which brought the highway through the city of Hawthorne. The city officials vigorously opposed any alignment alternative through Hawthorne; they announced at the public hearing that, should the offending alignment

¹⁷This was one of over 30 meetings and conferences held by the Division of Highways preceding the public hearing.

be adopted, Hawthorne would never sign a Freeway Agreement with the State. As of the date of this writing, (summer 1969), the city has not changed its stand and has for the present, blocked the Division of Highways from proceeding with the design phase.

Planning for the second stage of the Century Freeway, from the first stage's eastern terminus to Route 605, was started in October 1963.

In January of 1964, the District Office recommended the southern-most alignment (Yellow-5-Yellow) to the State Highway Engineer and also suggested that Central Avenue be made the project limit rather than California Avenue.

On December 30, 1964, the Division of Highways called for another large Staff Meeting, attended by some 50 community officials, to discuss the data which had become available since the public hearing. Most of this dealt with the traffic needs of the airport and was coming out of a traffic study the Division of Highways had initiated to deal with the airport controversy.

The State Highway Engineer made his recommendation to the CHC June 18, 1965, endorsing the Yellow-5-Yellow alignment. The Commissioner of Public Works, in turn, endorsed the State Highway Engineer's choice in his recommendation to the Commission on the same day.

Watts-Willowbrook issues, 1965-1969

Because the CHC knew that some of the actors who had been taking part in the airport controversy were strongly opposed to the alignment proposed by the State Highway Engineer, the Commission scheduled a public hearing on its own motion. The hearing was held August 13, 1965, at the

International Hotel, 6211 W. Century Boulevard, which is at the western terminus of the Century Freeway, the Los Angeles International Airport.

In Watts, at the eastern terminus of the Century Freeway's first stage, a riot had been smoldering since August 11 and was, by August 13, breaking into its most violent phase of firebombing and looting.¹⁸ While the black communities of Watts and Willowbrooks through which the Century Freeway was planned had not presented any great controversies, such a dramatic demonstration that all was not well in Watts is sure to have made some impact on the CHC. However, it was not until one year later, after the summer of 1966 demonstrated that the 1965 unrests may have been only the beginning, that the California Highway Administrators were asking each other,¹⁹ maybe, the construction of a highway through the black community created some problems that were not being dealt with by existing provisions. The highway decision-makers in the entire country had for a long time been living with the ironic theorem that, even though the construction of new highways tends to be very beneficial to society as a whole, it is incumbent on the people who are displaced to absorb the negative impacts that happened to fall on them - by themselves, "for the good of society". Some people within the Division of Highways realized that, in the now obviously explosive black neighborhoods, the inadequacy of the then existing relocation procedure could well jeopardize the implementation of the entire Century Freeway.

¹⁸Report of National Advisory Commission on Civil Disorders, A Bantam Book, 1968, pp. 37, 38.

¹⁹i.e. in internal Division of Highways communication.

The issue in California was the same as it has been in every other state; people who were being displaced by the highway, and who lived in an area where the real estate market was depressed for one reason or another, could not, under existing laws, be fairly compensated; - which is not to imply that highway administrations had necessarily been trying. Once the higher echelon staff in the Division of Highways became convinced, however, that the existing procedures were so dangerously inadequate that any future urban highway displacing large numbers of low-cost housing units was threatened, they moved to correct the situation. They saw to it that necessary legislation was written and they did the essential lobbying to see it become law²⁰ in 1968. While it is uncertain at the time of this writing that the effect of this legislation will suffice to head off a confrontation with the black community of Watts-Willowbrook which, it appears, is bound to be the site for an interchange, displacing about 2600 families, there can be no question that the California Division of Highways' efforts have ushered in a complete rethinking of the highway establishment's responsibility toward the people displaced by highways.

The CHC made its selection of the Yellow-5-Yellow alignment with the modified project limit at Central Avenue in Watts, December 15, 1965.

Lynwood alignment issues, 1965-1968

The cutting back of the first segment to a new project limit left the highway aimed right at the mid-section of the city of Lynwood, a mun-

²⁰This refers to Assembly Bill 1072.

unicipality which the original alignment alternatives barely touched. The fight which now ensued among the municipalities as Lynwood struggled to get rid of the highway by doing unto its neighbor as some of them had done unto her is a classical example of the attitude that appears to be held by most municipalities; to wit, such cities appear to want a new highway enough to lobby for its implementation - provided it is built through the neighboring community rather than through its own area.²¹

Because Lynwood's municipal neighbor to the south, Compton, is a black community and Lynwood is almost completely white, the highway location's racial implication became a big issue.

At the Final Staff Meeting for the second stage, held April 27, 1966, the Division of Highways staff showed seven alternative alignments they had investigated and developed comparative data for. Municipal actors asked that an eighth alternative, the Green alignment be explored. This necessitated the postponing of the public hearing which had been planned for later that spring.

The Division of Highways would have been ready with the needed data on the Green alignment by fall of 1966.²² In the meantime, however, they

²¹ While not every city displaying this unneighborly quality can be granted the benefit of this rationale, there are, in fact, some reasonable arguments for wanting an expressway in the neighboring community. A traffic generator, such as an industrial plant or an auditorium, parking and discharging tens of thousands of cars in very short periods of time is best served by controlled access roads if it is one to two miles away from them. This permits the cars to disperse by taking advantage of many local streets leading via approximately equally long paths to a number of ramps. Officials of the Hollywood Park race track in Inglewood for this reason preferred the southerly alignment of the Century Freeway's first stage rather than one of the much closer, northerly alternatives.

²² Economic and traffic data for the Green alignment was ready by August 1966.

had become increasingly worried about the possible effects of the relocation program's inadequacies in the black communities of Watts and Willowbrook, and they postponed holding the public hearing until they felt confident that a solution to the displacement problem was feasible; the public hearing was held March 30, 1967.

On July 15, 1967, the District Office made its recommendation to the Division's chief, the State Highway Engineer. They recommended the Brown alignment which follows railroad tracks through the center of Lynwood. However, when on September 12, 1967, the State Highway Engineer made the Division's official route recommendation to the CHC, it was the Green alignment that he put forth as the best alternative.

On September 21, 1967, the CHC formally declared its intention to make the final highway location decision. They scheduled their public hearing, which Compton and Norwalk had asked for, for January 16, 1968. Like the Division of Highways' public hearing, this hearing was postponed because the CHC felt uneasy about the potentially explosive climate in the black community and did not want to confront the public with predictions of large residential displacement without more assurance that a workable rehousing program was feasible.

After the group within the Division of Highways' Right-of-Way Department which was working on a solution made its first report, the CHC finally held its public hearing April 16, 1968.

On July 24, 1968, the CHC adopted Brown-Dash Brown-Green-Orange as the alignment for the second stage of the Century Freeway. This is the route going along the railroad line through Lynwood; its choice satisfied all parties except Lynwood and Norwalk.

With the route adopted, the job of working out specific alignments and design features was turned over to the design staff of the Highway Division. One of the first issues which arose for them was the decision of enlarging the Century Freeway. It had been conceived as an eight-lane highway, but recent traffic data suggested that a ten-lane facility was needed. Because the railroad tracks through Lynwood had to be accommodated, the median was widened. This extra room, it was reasoned, could accommodate some future rapid transit system.

The Downey controversy, 1969

The City of Downey played a very active role in getting the Century Freeway planned. It appeared that Downey knew what it was doing in lobbying for early highway construction; it got the alignment it wanted. On February 10, 1969, after years of working for the highway, the city reversed itself, objecting to the highway and announcing that it would never sign a Freeway Agreement.

XI.C. The Airport Controversy

The Century Freeway was sure to have a big effect on the ground traffic service to Los Angeles International Airport but, in the absence of a transportation plan for the airport and its rapid expansion, it was not clear where or how the highway would best connect to the airport. The Division of Highways staff met with the Airport Commissioner and Los Angeles City officials²³ in May 1960 to discuss the airport's traffic pro-

²³ Los Angeles International Airport belongs to the City of Los Angeles and is administered by a city Department of Airports.

blems. At this early stage the airport actors²⁴ and the Division of Highways both had the same goals; all wanted the Century Freeway to contribute as much as possible to improving the accessibility to the airport. Soon, however, other issues were added to the transportation question, and more actors began to assume roles. While one might identify many evolving issues, we shall look at just the three central ones: traffic service to the airport, land use under the flight path, and the phenomenon of other - quite remote - interests making the most of the above issues.

The Department of Public Works completed an origin and destination study for the airport in October 1960.²⁵ The data, it was hoped, would facilitate the design of a transportation system for the airport. Actors whose primary interests were something other than traffic service felt their own needs were not as legitimate as were traffic needs, and they therefore usually argued their cases in terms of traffic advantages or disadvantages. This behavior tended to cloud the issues.

While the airport administrators were dissatisfied with the existing ground traffic service and expected to expand the air-traffic handling capacity of the airport, they had no plans for a ground traffic system to handle the expanding traffic within the airport. As far as connecting to the area's system of highways, the airport administration wanted the Century Freeway to intersect Route 405, the San Gabriel Freeway, directly

²⁴The City Traffic Department, the Mayor's Executive Assistant in charge of the Department of Airports, and the Airport Commissioner were the first actors speaking for the airport.

²⁵Their Origin and Destination Survey for the Los Angeles International Airport was completed in October 1960.

east of the airport terminal buildings and then to continue to the terminal area where it would connect with Route 1. This alignment would also place the highway into the high noise area of the airplanes' flight path. The Division of Highways was never enthused about this proposal because, in their eyes, the concept compromised the Century Freeway's usefulness, making it more of an airport - feeder than a contributing link in the area's freeway system.

Airport operators, airport users, and residents living under the flight path proposed that the highway be routed to lie under the flight path. Residents in Inglewood begged the Division of Highways to come through their property with the highway since they could see no other way of ever getting out. Most of them had bought their houses before the air traffic was any nuisance; then, air traffic gradually - and in recent years rather rapidly - increased until living conditions became almost unbearable. The people who own houses can only leave at the cost of selling their houses for far less than what most of them have invested in them. The airport operators and users, with their minds on recent unfavorable court rulings in Pennsylvania, realized that they could, potentially, be held liable for these residents' losses.

This unlikely combination²⁶ of actors asked the Division of Highways

²⁶It would be going too far to call it a coalition. Each of these two actors, the resident in the flight path and the airport operator, tends to see himself as the victim of the other. That this could be the resident's view I find not difficult to imagine; that it also could be an airport operator's view requires some imagination. Archie League, Director of Air Traffic Service wrote in 1965 that ... "there are many airports that are encroached upon by high density residential development. This certainly applies to the Inglewood area..."

Oddly enough, the encroachment business aside, if the housing in

to help them, i.e. to use the highway as an instrument for helping to alleviate the hardships they were inflicting on each other.

The Airport Commission thus had mixed motives in pursuing a solution to the airport transportation problem. While the traffic needs of the airport could be satisfied in several ways, there was only one way that the highway could lower the airport operator's liability. Therefore, they were less interested in a design giving optimal traffic service for the airport but which located the highway somewhere other than under the flight path, than they were interested in a design giving only satisfactory traffic service but placing the highway under the flight path. Because a study to determine the airport's long-range traffic needs might well suggest a design solution which did not place the Century Freeway under the flight path, the Airport Commission could not join an all-out traffic study for the airport with enthusiasm; it had a better chance of satisfying its primary goal by suggesting and lobbying for and against specific alignments.

The Board of Airport Commissioners engaged an engineering firm as consultants. In July 1963, they had a report in hand which purported to show that a northerly alignment was sure to yield a higher benefit-cost ratio than a southerly alignment would, i.e. it showed what it was supposed to show. The report, though it employed some techniques that made any of its findings questionable,²⁷ could be useful to the airport actors

question were of high density, i.e. rental apartments, the problem would not exist because the residents could pick up and leave. The housing consists of one-story single-family owner-occupied houses.

²⁷The consultant, Daniel, Mann, Johnson and Mendenhall, obtained traffic prediction different from the ones the Department of Public Works had

in lobbying and negotiating for their choice of alignments. The Division of Highways was reluctant to discredit and dismiss the report because of the consultant's stature in the engineering community; the best it could do was to make a better study.

The Division of Highways, realizing that the Airport Commission's heart was not really in the study of traffic service, moved to separate the flight-path liability issue and the airport traffic service issue.

The traffic service issue

In April 1964 the Division undertook a new and more comprehensive origin and destination study. Minor zone to zone and long trips were simulated for the airport area's projected 1980 traffic. By September the study was completed. The findings suggested that the airport presented two problems:

- 1) The airport, because of its two-dimensional size, creates a block in the larger area's transportation system, and the traffic has to be carried around it.
- 2) The airport is a large traffic generator. However, the airport terminal area is only one part of this generator; even more traffic is being generated by the various industrial uses that are associated with the airport.²⁸

obtained, but they used such mechanisms as "an eyeball method" for trip assignments and assuming 30 MPH traffic on the southerly alignment of the Century Freeway while assuming 60 MPH traffic on the northerly route!

²⁸The entire airport complex is expected to generate an ADT of 300-600,000 by 1980.

The study showed that "the nucleus of an area of intense land use ...,

The traffic generated by the air passengers was shown to originate chiefly from the north-northeast, i.e. the Beverly Hills and Hollywood area; the traffic generated by employees working in the facilities located on the airport came from more evenly distributed origins.

A loop of freeways around the airport was recommended by the Division of Highways in January 1965 in order to meet both problems mentioned above. To make for swift access to the air terminal for the air passengers, the Division proposed to extend Route 170 from the north to the airport terminal, rather than use the Century Freeway. This plan probably went farther than anything the airport officials had had in mind, and they received it with some enthusiasm. When, in July 1967, the City of Los Angeles released a plan for the airport's development to 1975,²⁹ it proposed to provide links to the airport terminal area from all four sides via the freeways that are to loop the airport; it proposed to build two additional tunnels under runways.

There is no doubt that this design solution to the airport's traffic needs will provide better service than what the airport actors originally wanted. The Division of Highways' insistence on studying the transportation needs and then making plans to provide for them, measured in traffic service, will have been in the interest of all concerned.

"when the present traffic at the airport entrance (36,000 ADT) and their projected 1980 traffic (75,000 ADT) (was) compared to other possible land uses, it (became) apparent that the airport itself ... (did) not generate the higher traffic volumes".

²⁹Report on the Master Plan Development of the Los Angeles Department of Airports.

The flight path liability issue

From the points of view of the residents under the flight path and of the airport operators, the highway would have been used to its full potential if it were located and designed so as to take as much of the residential land as possible under the flight path. This would have called for, ideally, an alignment in precisely the same direction as the planes approach the two parallel southerly runways.³⁰ A wide, space-consuming highway was this group's most preferred design feature; in fact, a sprawling interchange was what they were really hoping for.

It is worth noting that the solution of the airport traffic service problems does not rule out such an alignment. A freeway loop around the airport could be provided regardless of the highway alignment east of Route 405. Before the loop ever was proposed, we must recall, it was thought to be a question of getting either a northerly alignment dead-ending in the airport terminal area, a northerly alignment bypassing the airport, or a southerly alignment bypassing the airport. Because the two northerly alignments took up more land under the flight path, the airport actors tried to convince the Division of Highways that the northerly alignment was superior to the southerly alternative. The Federal Aviation Agency (FAA) became one of the airport actors, they, like most actors who took sides, were doing so for their own good. The FAA had "adopted"³¹ as federal policy the concept of placing highways under

³⁰The northerly runway is used mostly for take-offs and thus has its noise impact over an area of waters of the Pacific.

³¹"Adopted" had a questionable meaning since they had no direct way of

flight paths. The local airport actors seized on this and, when the Department of Transportation (DOT) was created they hoped that the policy could finally be implemented by having it adopted up through the FAA hierarchy of DOT, through the Secretary of DOT, and back down through the BPR hierarchy to the California Division of Highways. It did not work out; Najeeb Halaby, the FAA administrator endorsed the policy and so did Alan S. Boyd, Under-Secretary of Commerce for Transportation (later Secretary of DOT), but the policy failed to come back down through the highway chain of command.

The concept was not inherently unacceptable to the highway people; they rejected it largely because the airport actors failed to convince them that they were sincerely concerned about helping the unfortunate people under the flight path. They found that, even if they cooperated to the fullest by aligning the highway to help the airport operator lower his liability and to help the residents escape from the flight path:

- 1) The highway would take only 8-20% of the 3,740 homes in the most severely affected noise-zone.³²
- 2) The airport actors were not prepared to share the cost of any added cost to the highway due to such an alignment; and, most

implementing it; it amounted essentially to wishful thinking.

³²The Division of Highways, working from classified (!) data provided by the Los Angeles Department of Airports, computed the percentage of the 3,740 homes lying within the 115 decibel contours of the noise pattern under the flight path that each of the contemplated alternative alignments would take.

Red would take 15% of these.

Red-7-Red would take 20% of these.

Red-2-Blue-Red would take 8% of these.

Yellow, of course, takes none.

significantly,

- 3) the airport actors, including the FAA, were not engaged in - nor did they plan to become engaged in (by their own admission) - a program for taking care of the remaining 95-80% of 3,740 homes.³³

When the CHC chose the Yellow-5-Yellow alignment on December 15, 1965, it argued that the minimal effect a northerly alignment could have on alleviating the noise problem - in the absence of any other program - was not enough to settle for a highway alignment which, in terms of highway traffic performance, was inferior.³⁴

Other actors take sides

During the early steps of the planning process, when the Division of Highways generated alternatives, the many actors who later took part in trying to influence the decision-making did not participate. Once the Division had generated some alternative alignments and was developing data to predict the impacts of each one, the highway became real enough for the city governments and the aero-space industries to express their likes and dislikes about the alternatives.

Some of these actors hired their own consultants to develop reports which would allow them to show that:

³³This was admitted quite bluntly at a meeting June 26, 1964, attended by Joseph H. Tippet, Regional FAA Director; Ed Marsh, his deputy; C. J. Winger, Chief of Airports Division, FAA; Fred Wild, Chief of Airport Planning Branch, FAA; A. E. Horning, Installation and Materials Division, FAA; and E. T. Telford and his deputy, of the California Division of Highways.

³⁴Statements by Commissioner Joseph C. Houghteling.

- 1) the impact predictions of the Division of Highways were wrong in the case of some or all of the alternatives, or
- 2) there would be other impacts which the Division of Highways was not listing.

Even though most of the industrial actors involved here probably had more sophistication than the average industrial actor can be expected to have, they were slow in getting involved. When they finally did take part, they did themselves a disservice by being unobjective in the development of their scientific reports to the point of being dishonest. These actors' advocate consultants usually generated reports which purported to prove that the choice of a northerly alignment would do one or both of two things:

- 1) it would provide traffic service superior to the service provided by a southerly route,
- 2) it would necessitate particular aero-space industry to leave the area because of vibration problems created by the highway.

The Division of Highways accepted these reports as data after making a study of its own to determine whether the purported findings were valid. This procedure permitted the Division to accept valid recommendations and assess the actor's motivation by the presence or absence of attempts at deception in the report.

Typically each actor had his own goals and worked for that goal in his direct contacts and negotiations with the Division of Highways. Be-

sides this, many actors tried to advance their goals by casting themselves into one or more other roles, which permitted them to make different arguments, under different circumstances - for the same solution - as they advocated in their original and more forthright roles. Actors, such as the municipal officials of Hawthorne and El Segundo, saw the airport controversy as an opportunity to make an input in addition to the one they were making in their official capacity when speaking for their own respective constituencies. They spoke up for the unfortunate residents under the flight path - even though the people in question were residents of the neighboring city of Inglewood rather than part of their own constituency. Ironically, the city government of Inglewood was adamantly opposed to a northerly alignment; i.e. it did not like the idea of having the people under the flight path displaced by a highway.

We thus had a situation where a large number of residents of Inglewood under the flight path, the airport operator - in a sense the first group's tormentors - and the city government of Hawthorne all argued for a northerly route, and the city government of Inglewood, i.e. the official representatives of the residents in question, argued for a southerly route.

Another method the actors involved in the airport controversy employed to extend their influence on the decision-making was to take part in - if not to create - civic organizations. Once members of the CHC realized, however, that the officers of some of the organizations were the same as the spokesmen for the aero-space actors, the effect was lost. They were simply taken then as a special interest which had to be considered but which was not necessarily representative of the broader pub-

lic. In fact, some of the private citizens and institutions who joined these organizations may have compromised whatever influence they might have had, by having officers represent them who had axes of their own to grind.

The airport traffic and flight path issues provided a focus for a tug of war between southerly and northerly alignments and attracted the involvement of the many actors who were not directly concerned with those two issues. With the evolvement of the master plan for the airport development and its solution of the airport traffic problem, this focus began to dissolve; eventually, by 1968, the Department of Airports which had been the most ardent pro-northern route advocate, was willing to accept a southern alignment. The controversy's focus further disintegrated with the failure of Inglewood, the FAA, and the airport operator to show any inclination to do something on their own about the plight of the people under the flight path.

XI.D. Hawthorne's Opposition to the Highway

The northerly vs. southerly alignment choice directly east of the Los Angeles International Airport amounted to the choice between locating the Century Freeway in the city of Hawthorne or the city of Inglewood. The governments of both cities each bitterly protested the alignment in its jurisdiction but, and this is significant, both felt the highway was necessary and should be constructed as quickly as possible.³⁵

³⁵Precisely the same kind of struggle was repeated several times along the route: between South Gate and Lynwood, between Lynwood and Compton, and in a modified form, between Downey and Norwalk.

In 1963, before the Division of Highways held its public hearing, the Hawthorne City Council took a stand against the southerly alternative by threatening to refuse the signing of a Freeway Agreement should that route be adopted. The chosen vehicle for doing this was, as is typical, the formal resolution consisting of a sequence of "Whereas" clauses, winding up in a "Now, therefore, be it resolved" conclusion, all written in legalistic language.

The city sent a formidable delegation³⁶ to Sacramento in January, 1964, to call on Lt. Governor Bradford and the State Public Works Commissioner to impress on them that Hawthorne was for the Highway but was bitterly opposed to a southerly alignment. City Councillors also played an active role in some of the civic organizations that were created to have an influence on the highway decision-making.³⁷

City Manager Joy West and Mayor James Wedworth³⁸ were the city's most vocal spokesmen. They have argued that the southerly alignment's impact on Hawthorne's tax rolls was more serious than a northerly alignment's impact would be on Inglewood's tax roll. While opposing a southerly route, they at the same time asked that the Century Freeway, designed along a northerly route, be expedited; thus, not contesting the need for the highway - only its alignment. From time to time the Hawthorne City Council reaffirmed its stand by passing other resolutions.

³⁶The City Council, the City Manager, and the city's Director of Public Works.

³⁷Councillor Martin was Vice President of the Intercity Highway Committee as well as chairman, for four years of the Century Freeway Committee.

³⁸Wedworth has since been elected to the California Senate.

The Highway Division staff, being used to the Freeway Agreement threat³⁹ made their recommendation to the CHC in the face of Hawthorne's opposition. After the CHC adopted the, to Hawthorne, most offensive alignment, it again passed a resolution declaring that it would never execute a Freeway Agreement, and it ordered its Department of Public Works to break off any staff-level negotiations or consultations with the Highway Division. The City Council argued that, since it would never sign a Freeway Agreement, the Century Freeway was obviously doomed, and it would therefore be a waste of time and money for its professional staff to spend any more of its efforts on working with the highway engineers.

Having precisely the same kind of threat from Inglewood concerning the proposed northerly alignment as it had from Hawthorne concerning the proposed southerly alignment, the Division of Highways had to either discount both threats or assess which one was more likely to be carried out.⁴⁰ The respective city governments, realizing that the highway staff needed to assess their commitment to the threats they made, couched their threats in terms of policy statements which would indeed become very difficult not to carry out without losing face. The Highway Division's strategy, on the other hand, was to wait and to accept any - and every - invitation to present its case to private and public groups.

The Highway Division staff realized that they could help their cause

³⁹Other cities who threatened at one time or another during the planning phase of the Century Freeway not to execute a Freeway Agreement were: Inglewood, El Segundo, Lynwood, Compton, Downey, and Norwalk.

⁴⁰Internal communication shows that the District Engineer judged Hawthorne to be city which would be the more likely of the two to back down from its stand.

most by providing the two City Councils the opportunity to back down from its stand against the alignments by providing them with "reasons" for changing their policy. Because of this, they found themselves offering concessions, as well as some pseudo-concessions,⁴¹ aimed at making it possible for the city governments to retreat from their stand. As part of this strategy, it became essential that the Division of Highways not offer the city government any reason or excuse to intensify the conflict. Thus, when they were notified in 1965 that they were no longer welcome in the city's engineering offices, they obligingly refrained from sending surveyors into the city and began the initial design work with what limited information they could garner from whatever maps⁴² they could get without offending the city.

The resulting relationship between Hawthorne and the Division of Highways could thus be caricatured: Hawthorne claimed that the Division of Highways interests and their own were in complete conflict, but the Highway Department refused to fight - claiming that problems could and eventually would be worked out.

At the time of this writing there is no evidence that the Division of Highways is changing its role and is shifting into a policy of con-

⁴¹Two examples of pseudo-concessions:

- 1) Depressing the Century Freeway through Hawthorne - which was chiefly done to get the needed fill for the nearby Route 405 widening.
- 2) "Giving-in" to city demand for a joint development project for a municipal recreational facility in the Route 405 widening - which was an idea actually suggested by the Division of Highways.

⁴²They searched, for example, for sewerage system markers on aerial photographs rather than risk a headline-catching confrontation with the

frontation even though Hawthorne has not softened its stand in any perceivable way. This is largely because: The Division of Highways assess the expected result of a cooperative strategy to be higher than that of a confrontation strategy. If, however, they ever approach the statutory deadline of having to qualify the project for federal funding under the Interstate program, they may very well decide to change strategies and begin to apply pressure. Should this happen, the Division of Highways has the option to design the freeway through Hawthorne as an elevated structure, providing no access to it and causing no permanent changes in the local street pattern.⁴³ Such a solution would obviously be very disruptive since the city would then be stuck with the most undesirable design alternatives, without any of the highway's benefits. The Division of Highways is, at this date (1969) very careful to point out that such a design solution would be as distasteful to them as it would be to the community, and they will not threaten with such an action. All disclaimers aside - the option exists, and both the Highway Division and the city are aware of it.

From 1965 to April 1968 no official meetings took place between Hawthorne and State Highway officials. In April 1968 the city's staff was given permission to discuss the city's urban renewal plans with the Division of Highways. At this meeting the Highway staff got an opportunity to show the changes it had incorporated in its plans since 1965. The

city's administration by sending a crew into the field.

⁴³The Freeway Agreement is only needed if the Division of Highways causes a permanent change in the local street pattern by cutting some streets off, removing others, or merging ramps into the local streets.

city had adopted a renewal plan that should create a multi-block commercial area, and the Division of Highways promptly changed the ramp locations on the highway to better serve this new area.

Hawthorne's professional staff feels somewhat sheepish about the roles they are forced to play. Privately they hint that the CHC's choice of the southerly route makes sense, but they also point out that the Council's attitude of open conflict against the Division of Highways is shared by a large segment of Hawthorne's citizenry.

The communications channels within Hawthorne's city government all go through the City Manager, Joy West. The city's professional staff has no direct contact with the City Council. West speaks for them to the Council and the mayor, and - vice versa - he speaks for the Council to the staff. For example, he determines who may speak to the Division of Highways staff and what may be discussed. The professional staff are not about to endanger their jobs by offending him; why the Council accepts him as their interpreter is less obvious. West has managed to yield unprecedented power. To ask who is "the city" becomes, therefore, a legitimate question.

The Hawthorne mayor and City Manager took it upon themselves on the one hand to speak up for the Inglewood residents - in opposition to the Inglewood City Council - in asking for placing the highway under the flight path; on the other hand, West resented that the Division of Highways held a public hearing to get the local residents' reactions to the widening of Route 405. He suggested that it would be more appropriate for the Division to heed his interpretation of those residents' needs than to get a direct input from them.

XI.E. Lynwood Alignment Issues

As a result of the successful move by Lynwood's northerly neighbors⁴⁴ and the adoption of the Yellow-5-Yellow route the city of Lynwood, who until then had expected to have the highway cross at most a small corner⁴⁵ of its property, found it aimed squarely at its midsection. Though it eventually put up vigorous opposition, the city was slow in rising to the fight.⁴⁶ But a fight did develop over the highway' this fight focused on racial issues between white⁴⁷ Lynwood and its black neighbor to the south, Compton. Both are middle-class communities. While there is no obvious physical barrier which could be identified as a color barrier between the two communities, the Lynwood residents feared that the introduction of a physical barrier somewhere other than along the existing racial barrier, could bring about a shift of the racial barrier. Specifically, they feared that the construction of a freeway through more or less the middle of the city of Lynwood would cause the white area between that new highway and the city of Compton to be invaded by Negroes. This area has Lynwood's better, more expensive homes.

⁴⁴The cities of South Gate, Downey, and Santa Fe Springs had worked for moving the project limit back to Central Avenue and thereby leave more alignment options for the second project open.

⁴⁵The extreme northwest corner of the city which would have been affected by the Red route has mixed land uses, industrial and residential. The City Council felt the highway would make it feasible to get rid of the pockets of residential uses and make it all industrial; i.e. it expected the highway's effects, along the Red alignment, to have desirable effects.

⁴⁶The Highway Division staff, the municipal officials of Lynwood, as well as other actors now look upon Lynwood's actions with a sportsman-like attitude.

⁴⁷Of its 16,500 population, it had only five black families in 1969.

Throughout 1965, the Division of Highways was looking at only one alignment through Lynwood, the Orange route. City Council looked on this location of the highway as being extremely disruptive and looked for effective means of opposing it. In 1966, \$12,500 were budgeted for the fight; the money was for sending officials to Sacramento and for hiring consultants to help the city present its case at the Highway Division and the CHC public hearings.

Because the highway was sure to bring changes for the community, and because the Division of Highways to take each community's own master plan into consideration in planning the highway, the City Council decided to undertake a development for Lynwood. As part of Lynwood's effort to discourage adoption of the Orange alignment, City Hall, at one point, suggested the Brown alignment. The residents living south of Fernwood Avenue, however, protested immediately; they did not want to be left between the highway and the black community, and the city quickly withdrew its recommendation. During 1967-68 Lynwood had a consultant⁴⁸ carry out a study for the economic development of the city. To City Council's consternation, the consultant was recommending that the Century Freeway be located along Fernwood Avenue, i.e. the Brown alignment. Because of the citizens' strong opposition to an alignment through the center of the city, i.e. either Brown or Orange, the Council found itself in the position of getting professional advice to do precisely the opposite from what the residents wanted. As a result, Council gave the consultant's report as little official notice as possible and began to oppose the Brown as well as the

⁴⁸Economic Research Associates.

Orange alignment.

It was during this period of time that Norwalk and Lynwood became allies. Most actors were thought of fighting the Orange alignment not so much in terms of finding a new alignment but rather in terms of pushing the route out of the city to the earlier considered northern alignment.

In April, 1966, the Highway Division staff had seven different feasible alternative alignments and thought itself ready for a public hearing; it therefore scheduled a Final Staff Meeting. The cities affected by the second stage were allied thus:

- for the Red alignment:

Lynwood and Norwalk

- against Red:

South Gate and Downey

The Downey officials, uneasy about the two-to-two standoff, moved to upset this balance; they proposed an 8th alternative. Lynwood and South Gate officials joined the Downey officials in asking the Division of Highways to study a route roughly following the city line between Lynwood and Compton. The Division of Highways accepted the new data-gathering task, and the four cities involved found their alliances shifted:

- for Green:

Lynwood, South Gate, and Downey

- against Green:

Norwalk

The cities of Compton and Paramount, however, which had thus far not been involved in any of the Century Freeway decision-making, now had to be made a participant because the new alignment under consideration, if

adopted, would affect them. The Division sent out the proper notifications, and Compton had an observer attend the regular CHC meeting in May where Lynwood, South Gate, and Downey gave a presentation to impress on the CHC that a solution had been found with the approval of the majority of municipalities.

Before the public hearing was held March 30, 1967, the actors who had proposed the Green alignment and thereby had been able to change the two-to-two score between them to a three-to-one score, went to work lining up more municipalities for their alliance. The city councils of Bellflower and Santa Fe Springs, besides those of South Gate, Downey, and Lynwood, passed resolutions in support of the Gree-Orange route. This was easy enough to do; the Green-Orange alignment bypassed some of these cities completely and barely penetrated the others.⁴⁹ At the hearing, this alliance of municipal governments supported the Green-Orange route while Compton, Norwalk and the unincorporated community of Willowbrook opposed it. Paramount and the City of Los Angeles, the only other municipalities affected, expressed no preferences.

The unincorporated area of Willowbrook opposed Green-Orange because that alignment would threaten its newly planned Martin Luther King Hospital. The planning of this hospital had been immersed in racial controversy. In fact it was one of the few positive things that came out of the 1965 Watts riots. It was being planned to meet one of the Watts-Willowbrook community's dire needs: accessible, local medical services.

⁴⁹South Gate, Santa Fe Springs, Bellflower were bypassed; Downey and Lynwood were not bypassed but - they felt at the time - they were not violated seriously.

The generally white population of the county had already voted in a referendum against financing the hospital, but this obstacle had been overcome; an appropriation was obtained anyway. The highway was now seen as another attempt by the white establishment to eliminate the hospital.

Compton made two arguments opposing the Green alignment. It argued that the route would take some of its best tax producing property, and it argued that Lynwood was trying to create a physical racial barrier between Compton and Lynwood; it objected vigorously to this. The racial issue became the predominant issue surrounding the Green alignment. While each of the actors involved in the controversy admit privately that race was the issue, only Compton argued about the Green alignment's racial implications; Lynwood and its allies argued about the Green alignment's economic impacts. They held that it would be beneficial to Compton because it would stimulate that city's commercial and industrial development. Similarly, their opposition to the Brown and the Orange alternatives was justified in economic and fiscal terms. Lynwood actors found that it was taboo to admit that one was concerned about a black "invasion"; their racial concerns were not sufficiently legitimate to allow their public discussion. The black community, on the other hand, had the advantage of being on the side of a racial issue which was legitimate and therefore could be argued openly. Society as a whole was not willing to sanction openly the creation of racial barriers between ethnic communities.

The Division of Highways' predictions of economic impact suggested that Green indeed was the only alignment that would produce a positive net economic impact. But it also recognized the weak position of Lynwood. Because Lynwood had, for a moment, supported a Brown alignment, its later

opposition to it on all terms except race - which is the term which they could not, and did not, argue - had an artificial and empty ring to it. Consequently, the District recommended the Brown route to the State Highway Engineer.

The State Highway Engineer, in his official recommendation to the CHC, chose the Green route. Compton and Norwalk promptly asked for a public hearing by the CHC. Most of the pro-Green route city councils passed resolutions supporting the State Highway Engineer's recommendation, and Compton threatened never to sign a Freeway Agreement if the Green line was adopted.

When, in July, 1968, the CHC chose Brown-Dash-Brown-Green-Orange as the final choice, it became Lynwood's turn to protest loudly. However, because this alignment kept the highway out of South Gate, Santa Fe Springs, and Bellflower, and kept it in a southerly part of Downey, where that city wanted it, these cities no longer were interested in helping Lynwood oppose the Brown route; Lynwood thus suddenly found itself without allies. The city nevertheless made a vigorous effort in the following months to have the CHC reconsider the alignment. The local legislators Porter and Wakefield were pressed into introducing a resolution in the State Legislature asking the CHC to hold a re-hearing.

In late September a message came through informal channels to the Division of Highways that the real problem in Lynwood was with Western Gear, a manufacturing firm. Western Gear had made a lengthy, formal statement about its opposition to the Brown alignment. In response to the informal communication, the Division of Highways turned its attention to Western Gear. It learned that this firm was likely to lose four acres of

land it was then using for parking cars but which it planned to expand its facilities into. Since normal compensation for the land would be the "fair" market value of the land, the firm was likely to suffer a very real loss. The price of a vacant piece of industrial property did not express the value the particular land had for Western Gear since the availability, or non-availability, of this land directly adjacent to the plant was a crucial consideration in the firm's modernization and expansion plans. Once the Division was aware of the firm's problem it started to work on design solution which would permit the plant to go ahead with its expansion plans and still allow the highway to follow the Brown alignment. Both parties came to agree that it was feasible to carry the highway over the property in question, using only air rights.

When Western Gear and Lynwood became convinced that the Division of Highways was willing and able to design the highway in such a way that it would cause as little disruption as possible, Lynwood's opposition to the Brown alignment evaporated.

XI.F. Watts-Willowbrook Issues

Watts-Willowbrook is a black community which could not escape the Century Freeway no matter which alignment was chosen. The highway threatened to create problems for Watts-Willowbrook that are not unlike the problems experienced by some communities in other cities which are impacted by roads. While we can identify at least four distinct issues, they combine to the one simple fact that residents living in the right-of-way had to suffer, as a consequence of the highway, considerable hardships.

Watts-Willowbrook is a large black ghetto, and most of its residents have few ties outside the area. Their community is a very local one; the institutions which are meaningful to them and their friends are all in the area, - which is not to say that they had all that many institutions serving them. They had, for instance no hospital.

Watts-Willowbrook was an unusual ghetto; residential densities were low; there was ample open space. In 1967 almost half of the residents owned their own homes, and a rather high proportion of them were elderly people.⁵⁰ The whole makeup of the community suggested that the people to be displaced by the highway would have to be relocated within the low-income Watts-Willowbrook area, and possibly the neighboring black middle-income community of Compton, if their lives were not to be unduly disrupted.

The area had a depressed housing market. This meant that the "just" compensation to be paid to a homeowner for his property, i.e. the market value of his house, was bound to be lower than the replacement cost of that house. As a result, an owner whose house would be taken by eminent domain could not expect to find another dwelling for the money he realized from the forced sale of his house to the state.

The Los Angeles area housing market was such that it would have been an easy task for a relocation agency to demonstrate statistically that there was ample vacant housing available somewhere in the metropolitan area to accommodate the people displaced by the Freeway. Black people,

⁵⁰A 1967 survey showed 46% of the residents owning their own homes; 20% of these were retired.

of course, did not have access to much of this housing.⁵¹ This does not mean that a black family would necessarily be prevented by white residents and their realtors from moving into most communities; most black families were, for obvious reasons, less than eager to move - even if they could - into the midst of a prejudiced, and therefore generally hostile, white population.⁵² As a result, notwithstanding the statistics about available housing in the metropolitan area, the black people to be displaced in Watts-Willowbrook did not have sufficient replacement housing which was, in an operational sense, available to them.

Watts-Willowbrook had no official spokesman to represent its interests in negotiations with the Division of Highways. Unlike all the other communities in the highway right-of-way, the Watts-Willowbrook community is not congruent with a political jurisdiction. Watts is part of the City of Los Angeles, and Willowbrook is an unincorporated segment of the County of Los Angeles. Neither of the two respective governments represented the residents of the Watts-Willowbrook neighborhoods very well; both governmental bodies were responsible - and responsive - to the much larger white populations of their extensive respective jurisdictions.⁵³

⁵¹W. A. Routiry, District 07 Supervising Right-of-Way Agent in September 1966 reported to his superiors after conferences with realty boards and local agencies: "...Realtors...made it known that blacks can't very well move east of Alameda (Street)..."

⁵²It is not the purpose of this investigation to determine why the displaced black family did not have access to most of the housing market but rather to trace the consequences of this limitation on the highway location decision-making.

⁵³In suggesting that the Los Angeles City and the Los Angeles County governments were not responsive enough to the needs of the residents in the highway's right-of-way because they did not insist on a plan with adequate solutions from the highway planners, the author does not mean to accuse

In August, 1965, Watts erupted in what proved to be the first of a series of civil disturbances repeated across the country in the following several summers. This was happening while the CHC was holding a public hearing on the western segment of the Century Freeway only a few miles from the scene of the burning and looting. Neither of the two governments having jurisdiction over the Watts-Willowbrook area nor any of the black community's civic groups had made any strong objections to the Freeway's alignment through that area. The violent disturbances in Watts did not go entirely unnoticed however; the CHC and the California Division of Highways realized that these rioting people could very well prevent the Century Freeway from going through their community altogether if it threatened to be sufficiently disruptive to their environmental and social fabric. What disturbed some of the highway officials was the fact that the Watts-Willowbrook community did not appear to be aware of the proposed highway and of the disruption it threatened, - that they did not appear to realize the hardships that were inherent in the state's inadequate compensation and relocation provisions.

If the Watts-Willowbrook residents were not alert about the coming of the Century Freeway, which had been well advertised, they were, of course, even less aware of two additional highways planned for a somewhat later date. Route 90 was to run parallel to, and about four miles to the north of, the Century Freeway; Route 47 was to run in a north to south direction and was to cross the Century Freeway right in the Watts-Willow-

these governments of irresponsible behavior. They merely made the same error which they and every other local government had been making for years; they were satisfied to abide by the procedures prescribed by state laws and federal administrative guide-lines for compensating and relocating displaced residents.

brook area, necessitating a large interchange in that community. Some highway planners felt that even if they could manage to build the Century Freeway through the black community without causing a riot, they certainly could not build both highways and their joint interchange under the existing inadequate compensation and relocation procedures without the danger of precipitating violent protest of the sort then in evidence by the smoke columns to the east and the persistent sound of police cars, fire equipment, and ambulance sirens in the streets.

Because the Watts-Willowbrook residents had no advocates representing their interests with the Division of Highways, planners saw only two options open to them:

- 1) They could go ahead with the planning process, following their standard procedures for decision-making, and deal with the complaints and protests of upset, displaced people as best as they could after property-taking had started; i.e. they could pretend that the problems of the Watts-Willowbrook community were the same as those of any other community and that the compensation and relocation provisions were sufficiently adequate to proceed with "business as normal".
- 2) They could try to produce an advocate for the community.

Rudolf Hess was the California Division of Highways' Chief Right-of-Way agent in 1966. He took the initiative and forthwith outlined, for the benefit of the highway planners, the Watts-Willowbrook issues and the highway decision-making procedures' shortcomings with remarkable frankness.

In internal Division of Highways' communication, Hess sketched the following problems:

1) The Watts-Willowbrook people had poor access to jobs, and the construction of additional freeways in no way promised to solve their transportation problem.

- Only 14% of the Watts residents owned cars;
- public transportation was provided by a multitude of bus companies operating separate, uncoordinated lines and schedules;
- the different bus systems did not provide for free transfers and charged high fares.

2) The area was in desperate need of a hospital. The Los Angeles County electorate had just defeated a bond issue for an area hospital, and the County Supervisors were looking for other ways of financing its construction. The highway, however, threatened to infringe on the potential site of this much-needed facility.

3) People in the area needed low-cost housing and, in general, had low cost housing. Displacement by the highway, however, would change this; after relocation, people would find themselves in housing which was not necessarily better but certainly would cost much more.

- Median income in the area was \$3,700 per year;
- 24-40% of the residents were unemployed;
- the median value of these homes was \$7,700 with a high of approximately \$11,000;
- Renters paid an average of \$60 per month.

Most importantly, Hess opened the rest of the Division of Highways' eyes to the reality that the Watts-Willowbrook community's problems would be aggravated by the construction of the highway and that it had the ability to react by stopping the Century Freeway as well as Routes 90 and 47.

He recommended:

- 1) that the Division of Highways stop gathering the kind of information in the area which it normally assembled⁵⁴ and then made available to the public,
- 2) that instead,
 - a) the planning process for the Watts-Willowbrook segment be stopped
 - b) the public hearing be postponed indefinitely, and
 - c) that the Division make it known that it was concerned about the great disruption the highway threatened to cause and that it intended to do something about it.

Realizing that the Division of Highways was not in a position to analyze the community's problems as objectively as a disinterested party would be and that any solution that the Division proposed also would have a lesser chance of being accepted by the residents than the same solution proposed by a third party, Hess suggested that the University of California (UCLA) be engaged. He wanted UCLA to:

- 1) find out what impacts the highway would make on the Watts-Willowbrook community and its residents,
- 2) design programs to counter the highway's undesirable effects, and
- 3) take on the role of advocate for the community to see these programs executed.

The State Highway Engineer, Mr. Womack, accepted Hess' recommendation, stopped the highway planning process, postponed the public hearing inde-

⁵⁴i.e. highway impact predictions in terms of families displaced, tax value lost, jobs lost, construction costs, etc.

finitely, and authorized Hess to go about pursuing a solution along the lines of his proposal.

The University of California at Los Angeles had created an Urban Observatory and within three days of the riots was in Watts to begin researching the roots of the disorders. Thus, by summer 1966 these researchers had been in the field a whole year; they obviously had a good start on understanding the community's problems. Hess had UCLA's Urban Observatory in mind when he suggested involving a university group. Once he had Womack's permission, he asked them, as a disinterested third party, to predict the highway's impacts on the community to the end that programs might be designed to prevent or overcome them.

While Dr. Marvin Hoffenberg, the Urban Observatory's co-director, was sympathetic to the Highway Division's concern, he told Hess that his group would require at least two years to study the nature of the effects freeways have on communities, before they could be of any practical assistance. He and his associates felt that "...until such a study could be completed, they did not feel qualified to provide any recommendations or practical assistance...".⁵⁵ With this rebuff by the university group, the Division of Highways staff came to realize that if they did not take on the role, which they had hoped UCLA could play, no one else might do it.

In early winter, 1966, Hess' staff began gathering demographic and housing data on the Watts-Willowbrook community. By December, 1966, Hess felt that the data he had on hand suggested that the discrepancy between

⁵⁵Century Freeway Relocation Housing Project Progress Report No. 1; Project Report 07-LA-105 PM.R10.1 to X19.3, Book #3, February 1968.

relocation housing needs and relocation housing available was not quite as serious as he had feared. He recommended, on the basis of his preliminary data, that if there were strong pressures to resume the formal planning process, the Division could go ahead with the public hearing which had been postponed earlier in the year. He justified his recommendation not so much with the argument that the Division of Highways had a good solution to the community's problem as with the fact that he had sufficient statistics to show that a workable relocation program was feasible and could be developed.

In order to communicate to the residents that the highway presented a problem but also that the Division of Highways was doing something about it, Hess and his staff contacted a number of community leaders.⁵⁶ From these contacts, the highway planners learned several valuable facts which served to redirect their search for a solution.

One result of this was that Hess appointed Stewart Hill coordinator of the Highway Division's Watts-Willowbrook project. Hill, in turn, stopped trying to find a solution to the housing problem and concentrated on getting community participation. Almost any lead of a possibly interested party was followed up, and the number of contacts were expanded.⁵⁷

⁵⁶These early contacts included:

- State Assemblyman Leon Ralph
- County Supervisor Kenneth Hahn
- City Councillor Tom Bradley

⁵⁷Contacts:

- Chad McClellan and members in the Los Angeles Chamber of Commerce's Committee on construction industry
- Joe Hardwick, A Watts minister
- Dan Bryant, President of Bekins Van and Storage Co.
- Ted Watkins, Director of the Watts Labor Action Committee

Some of the early contacts with community leaders, it turned out, could not serve to establish communication with the people because the "leaders" in question had no standing in the community. For example, Reverend Hardwick set up a meeting at one point to let the Division of Highways' planners make a presentation of their ideas to other community leaders. Most of these "community leaders", however, lived outside the area and were, especially since the 1965 disorders, out of touch with the Watts-Willowbrook people. It became increasingly clear to Hill that the community did not recognize many - if any - leaders. The leadership was so fragmented that it was a continual struggle for any individual to maintain his influence. Such a leader, however, might see his powers grow if he could demonstrate that he had direct access to the highway planners; especially so, if he could convince the community that he represented the only, or at least the most direct, access, - i.e. that he had influence with the highway planners.

The Highway Division staff, thus, became weary of individuals trying to increase their own powers by trying to put themselves as necessary intermediaries between the highway planners and the public. Since Hill was not interested in propping up tottering community leaders but wanted to establish direct contact with the community, he had to change his approach.⁵⁸

⁵⁸This is not to say that Hill did not gain some valuable suggestions from these "leaders". While they may have been somewhat out of touch, they did have a better understanding of the community than he did, and they were able to point out some of the major shortcomings of his preliminary plans. They convinced him, for example, that high-rise structures over the highway right-of-way, - which had been one concept he had been considering -, would never be accepted as replacement housing by the displaced Watts residents because they were used to living in single or two-family units.

Doctor Hoffenberg of UCLA, as well as Leon Ralph, the black State Assemblyman representing the area, advised the Division of Highways that, unless the residents felt that they themselves had played a role in finding a solution, they would not accept any solution. The highway planners took this advice. The public hearing which had, after a long delay, been scheduled for January 16, 1968, was once again postponed.

On January 22, The Los Angeles Times published an article "Freeway Experts Explore New Plan For Resettlement". The ideas were, at this stage, still only ideas, and the Highway Division staff had therefore originally asked The Los Angeles Times not to write anything until they had a comprehensive relocation program ready which was well worked out. However, Mr. Bassett from The Times convinced Hill that premature publication was less dangerous than waiting too long would be. He argued that some kind of information was sure to get out to the public, and this information would most likely be badly distorted if it was communicated only by means of rumors.⁵⁹

⁵⁹The Southern Pacific Railroad Co. had been working on a development plan for an industrial development project in the Watts-Willowbrook area. They had asked the L.A. Times' staff to withhold the story until the plan was all worked out. The Railroad Co. expected that the community would like their plan because it was, in part, aimed at providing a wide range of jobs for the area's unemployed and underemployed. While the L.A. Times refrained from writing about the plans, the community still knew that some plans were being made and, more significantly, that Southern Pacific was trying to keep the plans secret. The residents felt that the railroad company was trying to keep the community in the dark because they intended to put something over on the local residents. Because the public received its first information - actually, misinformation - about the Southern Pacific Company's plans through such rumors, the community rejected the Company's plan completely when it finally was made public. It was felt that the public had become sufficiently suspicious of the Company and its policy of secrecy, that they would not have accepted any plan from the Southern Pacific Railroad Co.

It was expected that the combination of the Century Freeway and Route 47 would displace as many as 2,600 families. The problem, as Hill saw it by spring 1968, was that the low-cost housing that the highway would destroy could not be replaced on the open market. The more expensive housing that would also be taken presented less of a problem; such housing was available on the market.

Through spring 1968 the Highway Division kept making contacts with every individual and group that they thought might be able to contribute to the generation of a community-based plan. In early January, 1968, Hess, Hill, and other highway officials began a series of meetings with Mayor Yorty. While the city administration was not very responsive to the problems of providing relocation housing for Watts residents, the meetings had some other positive results. The highway planners became aware of the fact that the city administration was overwhelmed by a score of problems; they realized that it might in fact be beneficial to the highway agency and its effort to soften the highway's impact on the community to help the city's administration rather than ask for help from them. Thus, the Division of Highways contributed \$10,000 to the city's effort of writing up a Model Cities planning grant application; the area which was to be designated as the Model Cities Area included Watts.

As the highway planners continued their efforts to get direct inputs from the community, they benefited surreptitiously from some events. Hill, for example, helped Ted Watkins and Jack Conway⁶⁰ arrange a tour of Watts to Ford Foundation representatives Harly Gable, Marietta Tree⁶¹

⁶⁰Executive Director of the Industrial Union Division of the AFL-CIO.

⁶¹Former Ambassador to the United Nations.

and London Architect Lord Richard Llewlyn-Davis. As a consequence, the Ford Foundation not only awarded the planning grant for the community - which had been the objective of the tour - the grant was expanded in scope to deal with some of the housing problems created by the Century Freeway.

The Highway Division staff's working with the community also began to create some basis for confidence in the highway planners and their motives on the part of many citizens. Because there was no strong leadership in the community, however, the task of gaining the people's confidence was a continuous one. Hill feared that if the effort of answering all questions, making presentations to all interested groups - no matter how small - , listening to the people's problems, and making provisions for solving them, - were not a continuous on-going effort, the gains he had made in earning the public's confidence would quickly erode again.

As the Highway Division staff gained a better understanding of the likely results of building the highway, some of the first notions of possible solutions were dismissed.⁶² It became evident that existing legislation controlling the methods for determining the amount of compensation paid to property taken by eminent domain did not make it possible to build the highway without causing serious hardship to the people who were living in the right-of-way. Hill and the Highway Division's legal council drew up a bill which would make it legal to provide replacement housing to displaced residents - no matter what the cost.

⁶²e.g. building high-rise structures for replacement housing over the expressway.

Hess, who himself was a conservative republican, worked hard at convincing the republican legislators in Sacramento that the bill was desirable. At the same time Hill got the democratic assemblyman from Watts, Leon Ralph, to take an active part in designing the legislation. Even though Governor Reagan, with whom the writing of the bill was checked by the Highway Division, considered the bill to be an "administration bill", he was persuaded that it was essential that the black assemblyman from Watts sponsor the bill.⁶³ Governor Reagan included this bill in his legislative program of 1968. The bill thus benefited from the official backing of the somewhat unlikely combination of Governor Reagan and Assemblyman Leon Ralph.

The bill allows the Highway Division to buy or build housing for displaced people. The property need not be near the highway which is dislocating people but could be anywhere. The bill, of course, rules out taking property by eminent domain for this purpose. It makes no restrictions as to how the housing should be created, but in order to pacify the real estate interests in the assembly, who were not eager to see the Division of Highways get into the housing business, some priorities were established. When available, houses which were condemned because they

⁶³As Assemblyman Ralph tells it, the Reagan administration did not find it very easy to let him sponsor the bill. Two young republican assemblymen were called into the Governor's presence and given the draft of a bill. Even though the content of the legislation was completely new to them, they were asked to sponsor the bill and to encourage the black democrat Leon Ralph to co-sponsor it. When the two republican law-makers called on their black colleague, he accused them of trying to steal his bill because the bill they had been given by Reagan was the same bill as Ralph had been developing with the help of the Highway Division. The two republican assemblymen were somewhat embarrassed and disengaged themselves of the whole affair. Leon Ralph called a press conference and accused the Governor of trying to grab his bill.

were in a highway or airport right-of-way but were in good condition, were, as a first priority, to be moved to vacant lots in the Watts-Willowbrook area. As the second most preferred method for creating replacement housing, existing vacant buildings were to be purchased and, if necessary, remodeled by the Division of Highways and then offered as replacement housing. Only as the third priority was the Division to cause new buildings to be constructed.

Once housing is created, either by moving buildings, by purchasing available housing on the market, or by building new houses, the Division of Highways then offers a displaced person housing that is equal to or better than the housing he involuntarily moved from. With the legislation in operation, a home-owner whose house might have had a "market value"⁶⁴ of \$10,000 can be relocated into replacement housing of comparable space no matter what the actual market price of that house - e.g. \$20,000. A displaced owner will have the option to:

- 1) accept a replacement house - of equal or better size and in equal or better condition⁶⁵ which the Division of Highways offered him somewhere in the community, or
- 2) accept the assessed value of his former house - plus a solatium of up to \$5,000 - and take care of his own relocation.

The bill provides not only better tools for creating replacement housing for the home owner, it does the same for the renter. Provided

⁶⁴--resting on the assumption that there were a willing seller.

⁶⁵Replacement housing would, of course, have to be decent, safe, and sanitary; thus, if an owner were to vacate substandard housing, he nevertheless would be offered standard housing.

a renter cannot find another apartment of equal size at the same rent, the bill makes it possible for the Highway Division to subsidize his rent, for a period of two years, to the extent of the amount by which his new rent exceeds his old rent.

Bill 1072 represents a sweeping reform inasmuch as it does away with the notion that it is valid to proceed under the assumption that a willing seller exists when, in fact, that is not the case. While some of the Highway Division staff would rather do away with this myth of a willing seller altogether, they felt that such legislation was not feasible. Legislation making it possible to solve their Watts-Willowbrook problems, they felt, could only be passed if that legislation was limited in its application to specific areas, such as Watts-Willowbrook. Bill 1072 therefore includes such a limiting mechanism for an area to be eligible to take advantage of the provisions of the new legislation, the CHC has to declare that specific area as having depressed real estate values.

Since 1965 the California Division of Highways had been working on getting the federal Bureau of Public Roads to accept the Century Freeway as part of the interstate system.⁶⁶ At the same time that Hess and Hill were dealing with the Watts-Willowbrook issues, the Highway Division found itself making progress with getting the Century Freeway designated as an interstate highway. While there were a number of factors which set the stage for making it possible to put the Century Freeway on the

⁶⁶The first application for incorporating the Century Freeway in the interstate system was rejected by the BPR in 1965. It appears that the CHC's failure to choose an alignment which fell under the aircraft approach path for the Los Angeles International Airport was, at least in part, responsible for the quick federal rebuff.

interstate system,⁶⁷ the Highway Division's no-nonsense approach to solving the problems created by the anticipated impacts of the highway in the Watts-Willowbrook area appears to have contributed much. Bridwell, after hearing of the California Highway Division's intentions of actually solving the highway-connected housing problems in the black community, suggested⁶⁸ that the Highway Division elaborate on its plans for handling relocation - particularly relocation of minority group residents - when it applied again for inclusion of the Century Freeway in the interstate system. When the solution began to emerge, BPR and DOT officials were eager to tour the area.⁶⁹ Not only were the federal officials, particularly Bridwell, sympathetic to the approach by Hess and Hill, but the emerging federal policy of requiring state highway agencies to come to terms with local communities was, in turn, being reinforced by the Watts-Willowbrook developments. The California Highway Division was going well beyond the

⁶⁷The BPR removed several segments of planned urban highway from the interstate system in 1966 because they were sufficiently controversial to make it extremely unlikely that they could be finished within the then valid deadline for completing the interstate system. This had the effect of returning some mileage to the BPR's discretion for assignment to other highways. In another development, Congress passed a bill (HR 13442) which added 410 miles to the total mileage authorized. (See the Case of Highway 278, Union County, N. J. in Chapter XII.) The California Congressional Delegation, whose cooperation was needed to get this legislation desired by New Jersey, argued that since the State of California would be contributing approximately \$1 billion more to the Highway Trust Fund during the interstate system construction period than it would be getting back, the Century Freeway should be accepted into the system.

⁶⁸This communication was of a very informal nature; the recommendation was made verbally when the State Highway Engineer Legarre found himself on the same airplane with Bridwell.

⁶⁹On February 3, 1968, Hill showed Albert Kelley, Director of the BPR's Office of Public Affairs through the Watts-Willowbrook area; later that month Secretary of Transportation Alan S. Boyd took a first-hand look himself.

kind of requirements the BPR officials had in mind and was making it possible for the federal officials to argue credibly that their requirements were not unreasonable.

Involving as many of the local interests as possible kept having its effects on the planning of the Century Freeway. From the very outset of establishing the Century Freeway as part of the California Freeway System, the great concentration of industry in that area of Los Angeles was given as one reason for wanting to build the highway. The argument had been carried further, suggesting that the existence of the Century Freeway through Watts would give the Watts-Willowbrook residents better access to the great number of jobs in the surrounding communities; building the highway, in other words, would reduce some of the chronic unemployment and under-employment in the black community. While this probably was not a contrived argument, the highway planners meeting with local groups soon came to see that it bore little relation to the real world. For one thing, the residents in question, i.e., the unemployed, did not have cars; they needed public transportation, not expressways. And, more significantly, there was no shortage of industries near the Watts-Willowbrook area; there were dozens of large plants - mostly space oriented industries - employing many thousands of people within easy reach of Watts. The people working in these plants, however, commuted from all over the Los Angeles area, except Watts.⁷⁰

⁷⁰The Watts area urban redevelopment project by the City of Los Angeles was completely rejected by the community in 1967 partly for the reason that it failed to recognize this fact. It proposed extensive industrial development in the Watts community in order to provide jobs for its unemployed. The community knew that there were ample industries in the area around Watts but that the blacks were simply not employed there. Many residents

As a consequence of having found the argument of enhancing the employment opportunities in the black community by providing another highway to be faulty, the highway planners agreed in June '68 that the Century Freeway must include some provision for public transportation if it was to help the Watts-Willowbrook community at all. Bus service with a reserved express right-of-way has been given the most serious consideration as the appropriate mode of public transportation. As a result, the Highway Division went ahead and proposed widening the right-of-way to accommodate an express bus right-of-way for the entire length of the Century Freeway. Immediately the other communities along the Century Freeway's length protested.⁷¹

The municipalities which had arrived at an understanding with the Division of Highways and were willing to accept the highway had become impatient with the postponement of the planning process as a result of the anticipated relocation problems in the Watts-Willowbrook area; they had urged several times that planning be expedited. Hawthorne, which had opposed the eight-lane Century Freeway from the beginning was, of course, even less inclined to accept a ten-lane highway. The city officials of Downey who had been working rather hard for the construction of the highway without much involvement of their constituents reversed their posi-

became convinced that such plans were thinly veiled schemes to disperse the black community. Even if such a harsh judgment should prove incorrect, it remains a fact that no assurances could be given that new industries would be any more inclined to employ the black than the already established industries.

⁷¹Most of them had become rather disenchanted anyway with the highway planners for all the fuss they were making over the Watts-Willowbrook residents.

tion completely in early 1969; the fact that the contemplated right-of-way had been widened appears to have played a significant role in producing this switch.

XI.G. Downey Controversy

The Downey City Council was more actively involved in the Century Freeway decision-making than any of the other municipal governments. It supported the planning of the highway knowing that any alignment was almost certain to go through some part of their city.

The city's officials were only concerned about which part of the city would be penetrated by the highway; they wanted the route to be as far south as possible. Such an alignment would make the distance that the highway would be in the city shorter than a northerly alignment, but more importantly, the highway would not split the city in two and would avoid the best neighborhoods. The freeway, if it was far enough south, also promised to serve as a barrier. The residential area consisting of the few blacks of Downey's extreme southern section and of northern Bellflower - although white - is poorer than the rest of Downey. To ensure a southerly alignment, Downey's City Council, the City Manager, and the Director of Public Works preferred to work for a southerly route rather than against a northerly one, and they worked under this policy for years.

As early as January, 1964, City Council emphasized, in discussing three different study bands proposed by the Division of Highways, the importance of obtaining a southerly alignment. In 1965 and 1966 the Downey officials took the initiative in moves which virtually assured

the selection of a southerly alignment. The first of the moves consisted of making it possible to consider southerly alignments by terminating the first segment of the Century Freeway at Central Avenue rather than at California Avenue; the second move consisted of introducing southerly alignments and generating support for them. This was accomplished by introducing the Green route as an alternative and in aligning municipal governments on Downey's side of the inter-city struggle over the alignment.

The city council was not the only participant acting on Downey's behalf. As early as 1965 the Division of Highways met with the Downey School Board. The Downey Chamber of Commerce, which had the same sympathies as the City Council, found the task of lobbying for an alignment to their liking. Consequently, representatives of City Hall as well as of the business community made frequent trips to the state's Capital. The Downey Board of Realtors took a stand officially in 1967 endorsing the southerly route through Downey. After the State Highway Engineer recommended the Green route to the CHC, City Manager Oren King made it a point to appear before the CHC to praise the Highway Division's work and to suggest that the CHC make an early decision. He promised to keep the residents of Downey well informed about the location and timing of the freeway and stressed once again the importance of adopting a southerly route.

In March, 1967, some opposition to the southerly alignment materialized. The School Board passed a resolution expressing opposition to the southerly alignment unless the route could be designed to keep a greater distance between the highway and several schools in the area. Subsequent to the March 1967 public hearing it appeared that the City Council and

the School Board would work out a settlement. The highway staff, in line with the Division's standard planning procedure had put a big, fat line on the map showing a potential specific alignment but proclaiming that the actual specific alignment would only be determined during the design phase. The School Board made it a condition to their acceptance of a southerly alignment, that the distances between the highway and each of three schools, that could be scaled from the map of this preliminary alignment proposal, not be exceeded. These distances turned out to be 530, 960 and 1000 feet for the Ward, Carpenter, and Lewis schools, respectively.

Attempts by the Division of Highways to change these distance requirements for less arbitrary requirements - such as specific maximum noise levels generated by the highway traffic or, at least, some single minimum distance which was derived from a noise-level study, failed. Although the School Board claimed that its requirements of 530, 960, and 1000 feet for the three schools stemmed solely from its concern over the noise problem, it refused to get involved in discussing noise. The Division of Highways accepted the restrictions and demonstrated that a solution would be possible if the freeway were built over part of North American Rockwell's parking lot. A petition signed in May, 1968, by 200 residents objected to accommodating the School Board's demands on behalf of the Ward, Carpenter, and Lewis schools because the highway would pass eight other schools of distances from 120 to 670 feet.

If the School Board's refusal to discuss traffic noise criteria did not make the Division of Highways suspicious about the School Board's motivation, the Board's failure to respond to the challenge presented by the petition did. Mrs. Grace E. Horney, Trustee of the Downey Unified

School District, and the prime mover in the School Board's stand, was also residing next to the proposed southerly route.⁷²

By spring 1968 it had become obvious that the City Council's unqualified support of a southerly alignment was not shared by the whole community. Mr. Horney, the School Board Trustee's husband was trying to rally support for a stand against any southerly alignment and for a northerly route. A candidate for City Council from the part of Downey was yet to run for office on a platform of opposing the Century Freeway along any alignment through the city. In an effort to get the southerly alignment and quell the belated local opposition, the City Council created a Special Freeway Committee composed of two School Board members, the School Superintendents, two City Councillors, and the City Manager. With a southerly alignment virtually assured, the Council hedged its support: they would support a southerly route, but the Division of Highways, would have to work with the Special Freeway Committee. Even though, by this time, there was opposition other than just from the School Board, this new organization failed to represent interests other than the School Board and City Hall, - both of which the Division of Highways had been in contact with.

This new bargaining agent behaved in a manner which the Division of Highways too late recognized as not being in the best interest of negotiating a solution. They insisted that every meeting between them and the Division staff be a formal, broadly advertised, public meeting, i.e. almost like a public hearing. This requirement, especially in an election year, made for confrontation rather than for negotiation. By the

⁷²9102 Angell Street, Downey.

time a meeting could be held at which substance could be discussed⁷³ the CHC had made the location choice: the southerly route. Thus, Downey's Special Freeway Committee could now only influence the design process rather than the planning process.

In the fall of 1968, the Division of Highways carried out studies to determine the effects on the North American Rockwell facilities of the highway if it were carried over their parking lot. Findings of this study and the Division's resulting recommendations were discussed with the various local actors, including the School Board prior to the Highway Division's meeting with the Special Freeway Committee, January 14, 1969. Meetings of the Special Freeway Committee, permitting only public meetings, became a forum at which presentations based on the various meetings and negotiations could be presented but which did not lend themselves for negotiations. The committee merely absorbed the Division's recommendations without expressing opposition or any other feedback. Within the next few weeks the committee prepared its recommendations and delivered them to the City Council on February 10, 1969.

To learn what the committee's reactions were, the Highway Division staff attended the City Council meeting at which the committee would deliver its report to the City Council. On the evening of February 10 City Council, now consisting of the one anti-highway Councillor and the four Councillors - who had worked for years as the most aggressive actors in the Century Freeway location decision-making process and who had suc-

⁷³The first meeting was spent on introductory formalities. At the next meeting City Councillor Dan Winton asked for design data which was so detailed that the Highway Division required two months to prepare the data for it.

ceeded in getting the alignment they lobbied for - ordered the Special Freeway Committee's report⁷⁴ read into the record and accepted it without comment. City Council then read a resolution of policy declaring that the original justifications for the Century Freeway were no longer valid, and that therefore the City Council was opposed to the Century Freeway, that the City of Downey would never sign a Freeway Agreement, and that it was opposed to the intrusion of any freeway through the city. The Council permitted no debate of the resolution and adopted it unanimously.

The Highway Division staff were not alone in being surprised at the Council's actions; Downey's director of Public Works, William Spindel also appeared to have had no knowledge of the complete switch in attitude on the Council's part. Needless to say, he felt that he had been made a fool of by being left to continue discussions with the Division of Highways while the City Manager and the Council were drawing up their pronouncement of opposition to the highway. It appears that the only people besides City Council who knew ahead of time what was to take place on February 10 were the School Board members and the Special Freeway Committee members.

While the city can make its new policy stick, the Division of Highways people feel that the manner in which the city officials first promoted the construction of the Century Freeway and then switched its stand so completely, makes Downey subject to charges of not bargaining in good faith and will result in a lot of pressure being applied by other communities. The highway staff expect that, consequently, Downey will

⁷⁴The Highway Division staff felt that the demands were not unreasonable and a design solution could be negotiated.

earlier or later be moved to take a posture which will be less arbitrary.

The City Council, the School Committee, and the Special Freeway Committee, it appears, had worked out their strategy before the February 10 City Council Meeting. Oddly enough, the two official governmental bodies - the City Council and the School Board - probably had to violate California State law⁷⁵ to do this without any public discussion - the very thing they insisted on with the Special Freeway Committee which, not being a formal decision-making body, is not subject to the same law.

XI.H. Norwalk - Santa Fe Springs

On the eastern terminus the Century Freeway was to intersect with Route 605. A southerly alignment would bring the highway into Norwalk, while a northerly alignment would bring it into Santa Fe Springs. No matter which alignment was chosen, however, if the highway was to stop permanently at Route 605 rather than continue farther east, neither city would be very heavily impacted. The cities of Norwalk and Santa Fe Springs thus were concerned about two things:

- 1) Would the Century Freeway eventually be extended east, beyond 605?
- 2) Where along the north-south axis was the Century Freeway - Route 605 intersection to be?

The approximate alignment which was recommended to the Division of Highways by the Century Freeway Association in 1961 met Route 605 about

⁷⁵The Brown Act forbids official governmental decision-making bodies to hold closed meetings which are attended by enough of its members that decisions could be made.

where the later adopted southerly route came into 605. Because of this, Norwalk was the only member of that Association who was against the alignment recommended by the Association. In 1965 Norwalk was successful in getting a bill through the legislature eliminating the Century Freeway east of Route 605 from the California Highway System. While this did not put all their fears to rest that the highway might, at some later date, be extended eastward anyway, the City Council did not oppose the southerly alignment with the same vigor it had shown in 1961.

Norwalk argued that if the Century Freeway were brought directly into the existing intersection of Route 605 and the Santa Ana Freeway a better overall freeway system would result and the Century Freeway would yield a higher benefit-cost ratio. At the same time, the city was working hard on eliminating a future segment of the Freeway System. The arguments for this action had nothing to do with cost-benefit ratios, overall system efficiency, or other engineering criteria; the arguments stemmed from the city government's concern over the disruption the highway would cause in Norwalk, the displacement of businesses and residents, the cutting of school districts, the loss of taxable property, the increase in traffic, and the disruption of a political base. These concerns, expressed in a report which the Norwalk City Council adopted in 1961, don't have the empty ring to them that their pseudo-concern about benefit-cost ratios - coming from a municipality - have.⁷⁶

⁷⁶The benefit-cost ratio, as used by highway engineers, is a number produced by dividing the estimated monetary benefits derived by the users of the highway over the next twenty years by the costs of constructing and maintaining that highway. Dollar values are attached to man-hours saved by drivers (\$1.55 per hour), lives saved (\$30,000 per life), gas, oil, and maintenance differentials, etc., to get a "benefit" figure. The cost

Establishment of the Project Limit

Norwalk remained usually alone in its position of opposing a southerly alignment at the easterly terminus. At one point it found an ally in the City of Lynwood. That city had been, as it saw it, double-crossed by its northerly neighbors.

In 1964 the cities of South Gate, Downey, and Santa Fe Springs asked the Division of Highways to change the eastern project limit for the Century Freeway's first segment. The first segment was being planned to California Avenue. By 1963 it looked quite likely that the highway might be given a southerly route in its western part, an alignment which the Century Freeway Association had not anticipated when the discussion for the project limit were going on in 1959-1960. But even the most southerly alignment was still being brought north in the first segment's eastern portion, between Central Avenue and California Avenue. The city officials of South Gate, Downey, and Santa Fe Springs realized that, if the project limit were cut back to Central Avenue, the option of being able to consider also a more southerly alignment in the highway's second segment would be available - without having to raise the question of second segment alignment for the time being. They reasoned that, should the Yellow alignment be chosen in the first segment, not only would the option of a southerly alignment in the second phase be available, it would in fact be

figure includes only costs directly paid out for relocation, right-of-way acquisition, construction, and maintenance. Most significantly, the costs incurred by the municipalities, individuals, institutions, etc. who are impacted by the highway, are not included. A benefit-cost ratio, therefore, says absolutely nothing about the benefits and costs a city will incur due to a highway.

the most obvious alignment to try to get for the highway.

The Division of Highways was interested in a broader range of options for the second stage alignment and therefore incorporated the change proposed by the three cities in its recommendation to the CHC. Needless to say, these cities were less interested in the concept of a broader range of options than in the fact that, in the cases of South Gate and Santa Fe Springs, the added options meant getting the highway completely out of their communities, and in the case of Downey the added option meant pushing the road near the municipalities southern boundary.

When in December 1965, the CHC made the final alignment choice for the first segment it accepted the recommended change in project limit, thus terminating the first segment at Central Avenue in Watts.

Index of Abbreviations Used in Chapter XI

CHC	California Highway Commission
BPR	Bureau of Public Roads
ADT	Average Daily Traffic
FAA	Federal Aviation Agency
DOT	Department of Transportation
UCLA	University of California at Los Angeles

CHAPTER XII

ROUTE 278 EXTENSION IN UNION COUNTY, NEW JERSEY

XII.A. The New Jersey Highway Department and its Standard Decision-Making Process

XII.B. Sequence of Major Events

XII.C. Route 278 Linden to Springfield

XII.D. The Defeat of the Highway

XII.D.1 After the Defeat

XII.E. Contacts between the Highway Agency and the Public

XII.E.1 The County's Involvement

XII.E.2 Advocacy

XII.E.3 Rumors

XII.E.4 Politicians

In the area of Elizabeth, New Jersey, there are a number of expressways carrying traffic generated by Newark, Jersey City and New York City to the south and southwest. All of these highways run in a general northeast to southwest direction. Traffic from the Elizabeth area that has a destination to the northwest, i.e. that wants to move in a direction 90° to the existing expressways, has to find its way through the network of local municipal streets of Union County. (See Figure XII-1.)

While the streets in the 21 municipalities making up Union County were not designed for such through traffic, heavy traffic picking its way through these local streets was not the serious problem in the 1950's that it was expected to become in the late 1960's. Interstate Route 278 was planned to begin carrying traffic from Brooklyn, over a bridge at the Verrazzano Narrows - to be built by 1965 -, across Staten Island and a rebuilt Goethals bridge, into this area of New Jersey. A significant portion of this traffic was expected to have destinations west and northwest of Elizabeth.

In 1957 New Jersey adopted, as part of its State Highway plan, an extension of Route 278 from the Goethals bridge in a northwesterly direction. This highway was to cross, and thereby plug into, the northeast to southwest routes: the New Jersey Turnpike, Route 1, the Garden State Parkway, Route 22, Route 78, and finally connect to Route 287 near Cedar Knolls.¹ Routes 278 and 287 thus were to complete an inner loop around the New York metropolitan area. (See Figure XII-2.)

¹The section from Springfield to Cedar Knolls actually carries the route designation of 24F rather than 278.

The highway was planned in three segments. First a 1 1/2 mile portion was to be built from the Goethals Bridge into the city of Linden; the second segment, approximately 5 miles long, was to continue from Linden to the general area of Springfield where it was to connect to Highway 78. The third and final portion of this southeast to northwest route, approximately 6 miles in length, was to connect the 278-78 interchange with Route 287 near Cedar Knolls. (See Figure XII-3.)

We shall concern ourselves in this study only with the first two segments; i.e. with the highway from the Goethals Bridge to Springfield. The first segment is being constructed, but the Linden to Springfield segment has made history by becoming one of the -- to date (1969) -- very few planned highways that have been displanned. This segment of the 278 extension has been removed from the maps of the State Highway Department, as well as from the Federal Interstate System maps, not because of new traffic prediction data but because of fierce local opposition.

XII.A. The New Jersey Highway Department and its Standard Decision-Making Process

In 1966 the State of New Jersey created a Department of Transportation. While this has centralized the responsibilities for the planning of all transportation facilities, the highway construction program is by far the largest program of the new department.² Because the highway lo-

²The 1968 Master Plan for New Jersey's transportation system proposes a \$325 million capital improvements program for mass transit commuter facilities to be accomplished by 1974, and a highway construction program of

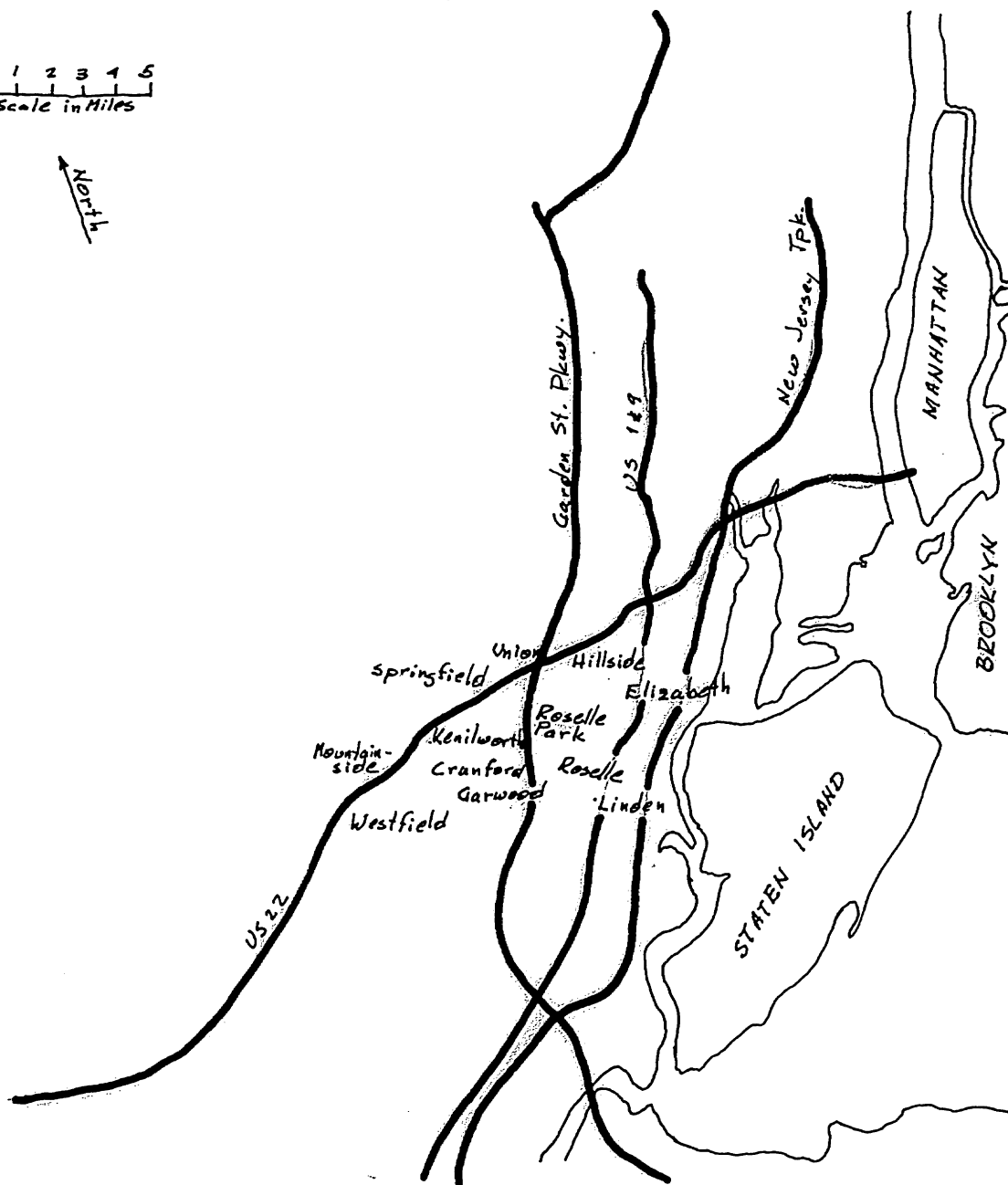
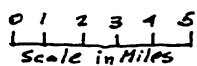


FIGURE XII-1: Major Highways in the area of Union County

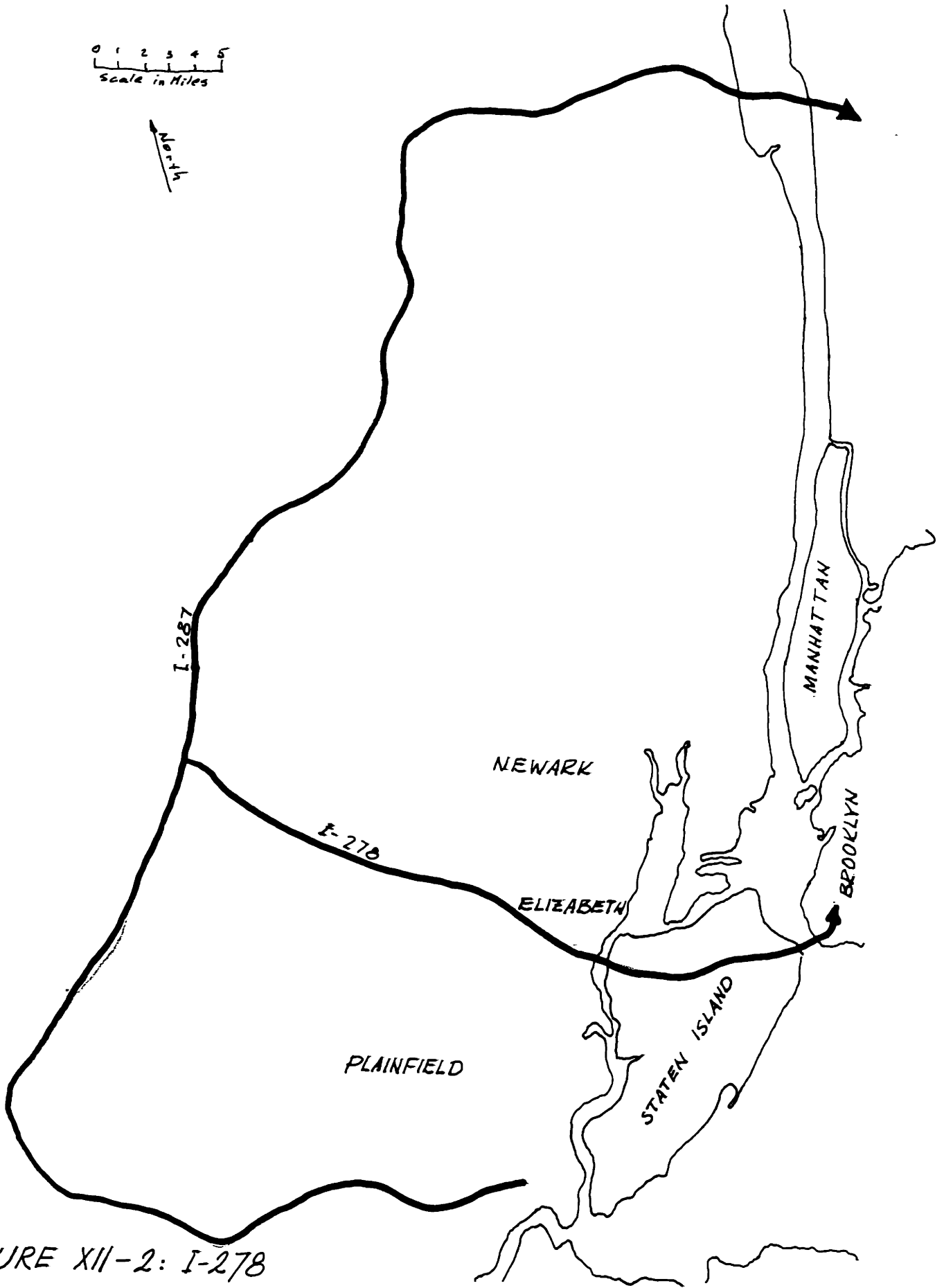
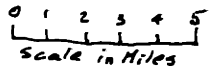
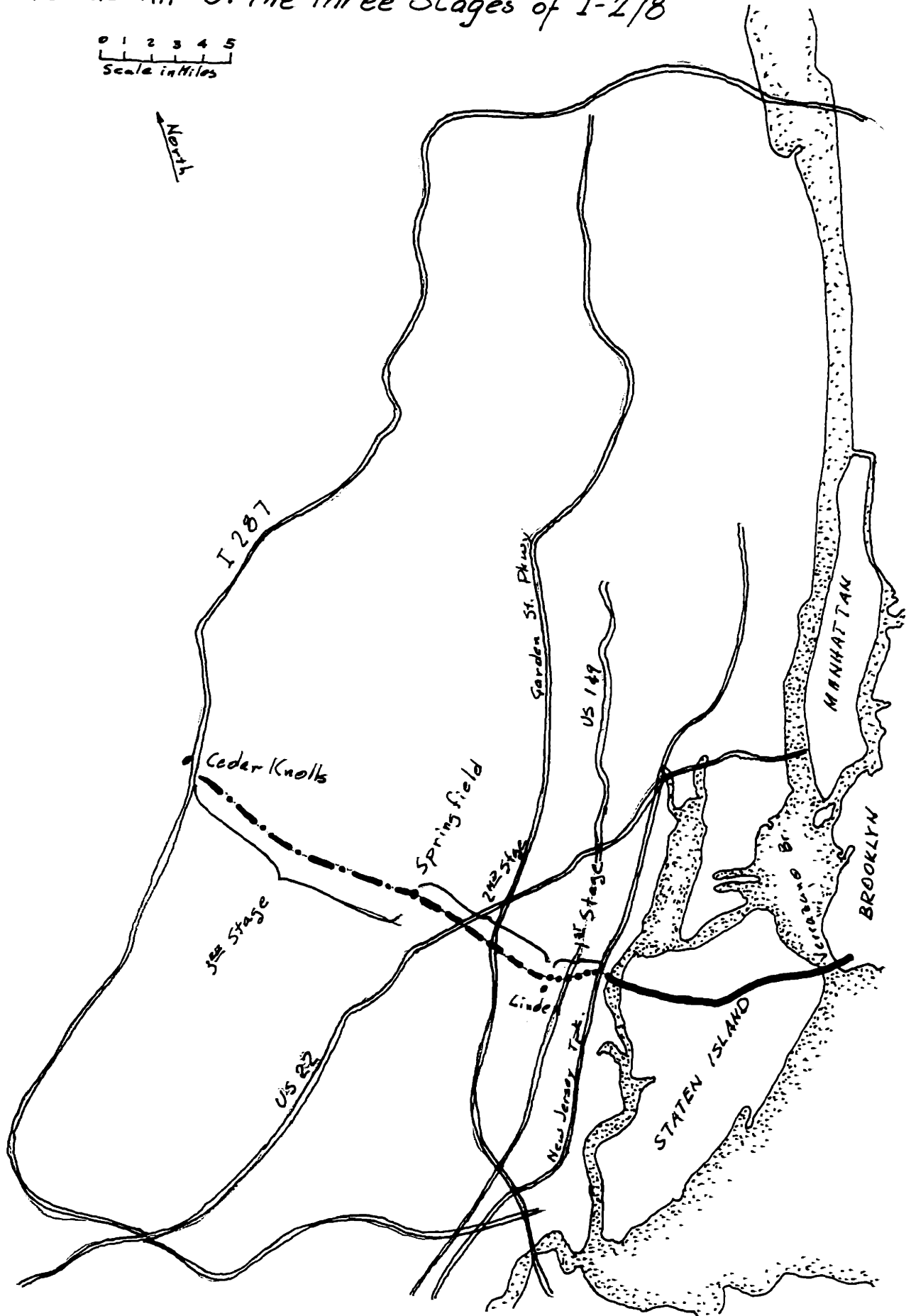
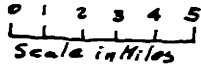


FIGURE XII-2: I-278

FIGURE XII-3: The Three Stages of I-278



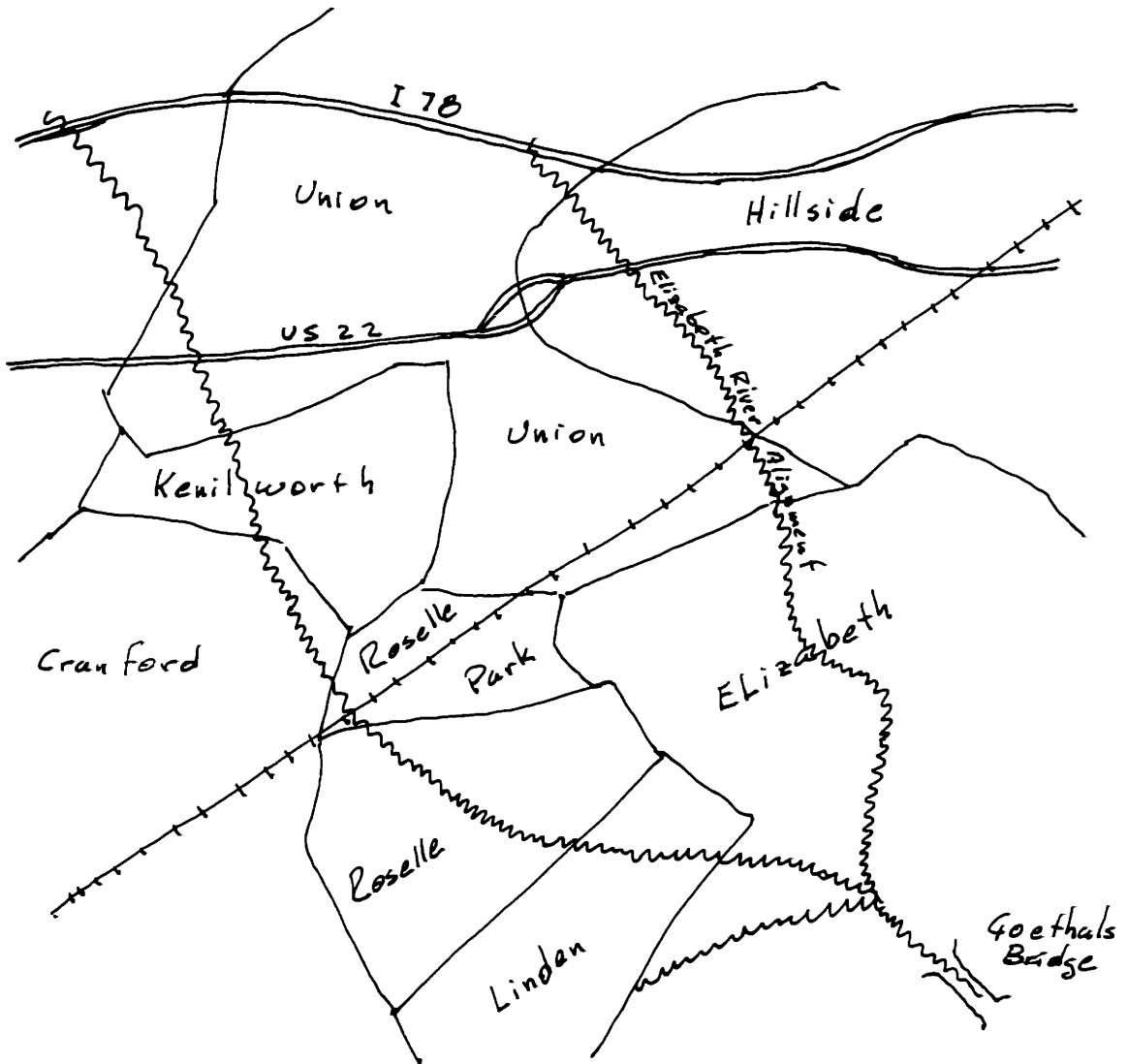


FIGURE XII-4: "Brush-stroke" and Elizabeth River Alignments

cation decision-making process does not appear to have been changed by incorporating the Highway Department in the Department of Transportation, the creation of this larger organization is not of significance to our study of the 278 extension.

The top echelon staff of the Highway Department are highway engineers who have spent most of their professional life within the Department. They see themselves as true public servants, working always in the best interest of the public. One of the things they have learned in their long years of experience is that "the public" is made up of many different -- and sometimes opposing -- interests. While the task of identifying which special interest groups are legitimate and which are not, could be unmanageable, the highway decision-makers' task has been made manageable by state and federal legislation which defines what the highway agency may spend money on.

The New Jersey Highway Department conducts, or participates in, studies to assess present traffic needs and to predict future demands. The highway network design for New Jersey has not changed much since 1927 when the first Master Plan was developed.³ The changes that have been made in the network are few. The data produced by recent and current studies serve largely for establishing a priority schedule for the various roads that are planned and for determining their needed capacities.

Since the decision-making process for California was described in

\$250 million per year.

Goldberg, David J., A Master Plan for Transportation, (Trenton: New Jersey Department of Transportation, 1968).

³Neither that "Master Plan", nor any more recent plan, however, has ever been officially adopted.

some detail, the process employed by the New Jersey highway decision-makers may best be described by pointing out the differences between the two processes.

Like all state highway agencies, the New Jersey Highway Department is weary of giving out information which could be used by some special interest groups to reap a windfall at the public's expense. While the California Division of Highways tries to deal with this problem by giving, from the start of the planning process, the widest possible public distribution to information about its studies, the New Jersey Highway Department aims to deal with the problem by keeping its studies confidential.⁴

Another major difference between approaches of the California Division of Highways and the New Jersey Highway Department consists in their respective definitions of the public. Naturally, the engineers in both states are dedicated to serve the public by providing for them the best

⁴To have these two highway agencies operate on what seems, opposite principles is not as odd as it might first appear. Their two different approaches should not be thought of being at the opposite extremes of a continuum; the two approaches are only two workable approaches. If a highway agency took it upon itself to release the desired information to only some of the actors, it would, in effect, have to determine which actors have a legitimate motivation and which ones do not. In these decision, it would not be possible to tell the difference between a misjudgment and corruption on a highway administrator's part. Thus, the question of approach reduces down to choosing either the approach of complete openness or complete closedness.

To pursue the notion of a workable approach a little farther, we find that a policy of complete openness is more workable than a policy of secrecy. It is extremely difficult, if not impossible, to carry on a planning operation for months -- or even years -- involving staff, documents, maps, reproductions, conferences, discussions, etc. and maintain secrecy.

highway transportation system they can produce with the resources given and the constraints put on them. While the New Jersey highway authorities consider the duly elected or appointed public officials the spokesmen for the public, the California Highway Authorities -- or so it seems from looking at the Century Freeway case -- are much more willing to speak to any and all interested parties.

The New Jersey Highway Department makes an effort to study all alternative alignments its staff considers reasonably feasible. When the benefit-cost data for each alignment have been arrived at, two or three of the best⁵ alternatives of the alignments studied are picked out for presentation to the local officials; until this time, the Highway Department's work is secret.⁶ The Department invites public officials from all local jurisdictions which are affected by the highway to a meeting at which the best alternatives that have been developed are finally disclosed. It is at this meeting that the public officials see the alignments that are being considered for the first time. The meeting has two purposes:

- 1.) The information, which, potentially, could be used to the general public's disadvantage if some actors had it before the others do, gets to all of the local participants simultaneously.
- 2.) The Highway Department gets some feedback from these local

⁵i.e. with the highest benefit-cost ratios

⁶Normally, local officials, civic groups, and other interested parties try desperately to get information about the routes under study from the Highway staff, or from the Governor, before this time.

officials. This helps them decide whether they should proceed to a public hearing, and it tells them something about the kind of reaction they can expect should they go ahead with the hearing. This meeting by the New Jersey Highway Department is the parallel of the California Highway Division's Final Staff Meeting. It is differentiated from the latter by:

- 1.) Only public officials are admitted, i.e. no representatives of civic groups can attend.
- 2.) The actors do not know what will be presented to them and are, consequently, in no position to respond at the meeting very intelligently.

The press is excluded from the meeting, and the material presented to the local officials continues to be labeled "confidential" for some time after the meeting.⁷

If the public officials' reactions suggest that one of the proposed alignments is sufficiently acceptable to the public, a public hearing is scheduled to be held within the following months and is advertised at least a month in advance. At the public hearing the Highway Department makes its presentation of the proposed alternatives, and every interested actor is given the opportunity to respond at the hearing.

The difference between this kind of a public hearing and the kind held

⁷It is questionable that the Highway Department's alignment studies can be kept completely out of the public's hands before the disclosure meeting with the local officials; it is even more unlikely that the information can be kept under wraps after the meeting. In fact, should the Highway agency succeed in keeping its alignment studies secret before the disclosure meeting, all local public officials are suddenly privy to information which is of extreme interest to some people in their respective localities. It is obviously the perfect set-up for inviting "selective"

by the California Highway Division is the same as between the meetings which precede the public hearing: the New Jersey public hearing is designed to inform the public; the California public hearing is designed to inform the Highway Division.

XII.B. Sequence of Major Events

By spring 1963 the Highway Department was ready to disclose some of the alignments it had been studying for the 1 1/2 mile segment of 278 from Goethals Bridge into Linden. It presented two alternative alignments to municipal officials of Linden at a meeting on March 6, which, in accordance with the Department's standard procedure, was closed to the press. The papers thus merely carried the story that two routes, each costing \$30 million, were disclosed to the officials, but nothing could be said about the proposed alignments. Then on May 23, the two proposed alignments were shown in the local papers and a public hearing to be held June 26 was advertised. "Area residents and other interested parties will be given an opportunity to express their views...",⁸ the announcement said. The private local actors had no information, however, other than the map carried in the paper May 23, to prepare their stands.

Before the meeting took place, the mayor of Elizabeth and some Linden City Council members came out in the local press against the Highway Department's proposal. While Elizabeth's mayor, Steven Bercik, proposed

use of this inside information; it is a textbook example of a situation inviting corruption -- the very phenomenon the policy of secrecy ostensibly is preventing.

⁸News item in Elizabeth Daily Journal, March 23, 1963.

a third alternative, Linden City Council President Jerome Krueger expressed a sense of frustration⁹ and futility by pointing out that Linden would suffer in any case -- whether a highway was built or no highway was built, whether the Highway Department's alignment was chosen or some other route was picked -- that finding the best solution consisted of finding the least harmful alternative. He argued that if the highway was built, it was bound to be disruptive to residential neighborhoods, and to reduce the city's tax base. If the highway was not built, then the entire street system of Linden would become congested since the traffic coming from Brooklyn and Staten Island would be aimed right at Linden by the Goethals Bridge; in fact, if the next segment beyond the first 1 1/2 mile piece were not built, this would still happen.

The June 27 public hearing proved to be an unfriendly affair. The Bayway Community Center, where the meeting was held, could not quite hold the 300 people who showed up for the hearing. After the Highway Department presented its preferred alignment for the 1 1/2 mile segment which was expected to displace 75 families, 50 individuals asked to speak in opposition. Herbert K. Englishman, the Northern District Engineer, retaliated by conducting the meeting without any intermissions for the next six hours.

While all speakers, private citizens and local officials alike, resented the highway, they appeared resigned to the inevitability of its eventual coming as well as to the inevitability of its detrimental impacts. Several new alternatives were proposed by these speakers, and

⁹Newark Evening News, June 16, 1963.

some of their energy was spent in condemning each other's proposals.¹⁰ One of the alternatives put forth at the public hearing was sponsored by the Linden City Council and had been designed by their City Engineer, John A. Zieman. This alternative involved changing the State's proposed route only marginally but promised to be substantially less disruptive to the city. Many speakers took sides by backing or opposing particular alternatives that had been put forth.¹¹

In the weeks after the public hearing, Linden kept demanding that the changes they recommended be incorporated. By the end of August, 1963, the Highway Department gave in and incorporated the demanded changes; this was expected to result in:

- 1.) Not isolating 56 homes which were threatened with being trapped between the highway and the Bayway Refinery with just one access road,¹²
- 2.) Reducing the number of homes to be taken in Linden from 75 to 15¹³

¹⁰Mayor Bercik, for example, suggested the highway be elevated on stilts -- rather than on earth fill as the Highway Department was proposing -- so that taxable property would not be diminished and the number of homes would not be reduced. One Linden resident offered the classical solution; he proposed an alignment which would keep the highway entirely outside his city.

Newark Star Ledger, June 27, 1963

¹¹The Eastern Union County Chamber of Commerce took Linden's side at the public hearing by favoring the Zieman's plan; the Union County Park Commission simply expressed opposition to any taking of park land.

¹²The Highway Department representatives had, at the public hearing, expressed regret about the unfortunate fact that a small residential area would be trapped behind the expressway but explained that state legislation prevented them from helping people who are not located in the immediate right-of-way of the highway.

¹³Linden actually wound up losing 70 anyway.

- 3.) Leaving a just-completed \$2 million municipal sewerage system intact
- 4.) Infringing upon the Eighth Ward Park to a lesser degree
- 5.) Leaving some industrial plants¹⁴ intact which would have been adversely affected.

XIIB.1 Relocation and Compensation

People who were being dislocated by the highway were informed that!¹⁵

- 1.) "Persons needing assistance ... (should) ... contact Paul Grosse or Hugh Lamson at the State Relocation Advisory Service, 1035 Parkway Avenue, Trenton ..."
- 2.) Property owners would receive the price that "a willing buyer would pay a willing seller ... (when) ... both are aware of market facts and neither is under any compulsion to sell."¹⁶
- 3.) Property owners would receive 25% of the property price¹⁷ three weeks after the signing of the first papers and the remaining 75% two to three weeks after they had moved out.

People who had to sell their properties at a price that might have been fair if they had been willing sellers, could not "be made whole

¹⁴The Highway Department's plans infringed on the Simmons Co., and interfered with the expansion plans of the Campbell Steel Company.

¹⁵Elizabeth Daily News, September 25, 1964.

¹⁶It is significant that no one objected to the application of this rule which, by the very definition of what was taking place: forced property taking, was certainly not descriptive of the seller's position.

¹⁷not to exceed 75% of the owner's equity in the property.

again" by taking their money and buying housing elsewhere.

In March 1965 elderly residents of Bayway walked the streets, carrying signs protesting the low prices they were being offered by the Highway Department. Some had been offered \$10,000 for their houses only to find that a new site -- without a building on it -- was likely to cost \$5,000 and more.

In spring 1964, Mildred Barry Hughes, a state Assemblywoman, introduced a bill in the assembly which would permit cities to sell municipally owned land to people dislocated by highways for new home sites. When this became law one year later, mayors of several Union County municipalities applauded it; the bill provided them with one mechanism in their meager kit of tools for lightening the burden of dislocated families. Obviously, this was not a very effective tool. Property owners did not necessarily want to buy land which the city happened to own and was willing to sell; for them there was no help. For the ones who could be accommodated, the city, in effect, offered sites at prices below the market rate.

The Highway Department had no means of helping the unfortunate people being displaced beyond what it was doing. Thus, as imperfect as the bill allowing cities to sell public property might have been, it was some relief. Elizabeth officials appealed to the Highway Department in April, 1965, to delay evicting residents long enough for the city to set up its land-selling priorities.

Another tool which the City Council of Elizabeth felt would be worth having was to make displaced people, particularly tenants, eligible for public housing on a first priority basis. Needless to say, most families

who had been living in private housing did not want to move to public housing; what they wanted was housing like they were forced to move out of -- at similar costs.

Information from the Highway Department about who would be displaced and when this would happen, became available only slowly and varied enough to confuse the public. In June 1964 State Highway Commissioner Palmer explained that he was not able to tell the to-be-dislocated people much because he could not find enough appraisers to appraise the 1,500 residential and commercial properties which would have to be acquired.¹⁸ The Highway Department then hired outside firms who began appraising properties in September 1964.

Even at this late date in the location-design process, with appraising already being carried out, the two cities involved -- Elizabeth and Linden -- still could not find out the exact highway alignment.¹⁹ In January 1965, the Elizabeth Redevelopment Agency finally was able to obtain a map;²⁰ Linden received a "final" alignment plan for the highway in March, 1965,²¹ The number of dwelling units Linden expected to lose

¹⁸Newark Evening News, July, 1964.

¹⁹Elizabeth Daily News, January 21, 1965.

²⁰A story in the Elizabeth Daily News, January 21, 1965 had it that "Elizabeth officials, who have been knocking their heads against a stone wall in an effort to get road construction plans from the State Highway Department finally have broken through. ... the state ... has sent the Redevelopment Agency a map showing plans for a road that would cut through part of the proposed New Point Road project ... Generally from Goethals Bridge, along the turnpike..."

²¹Elizabeth Daily News, March 9, 1965.

rose from a low of 15 in August 1963 to 70 by March 1965.²² Estimates of people to be displaced in the Bayway area of Elizabeth ranged from 76 to 1,500.²³ Much of this dislocation was expected to be caused by the necessary interchange between Route 278 and the New Jersey Turnpike. Since the Highway Department was not releasing much information, most of these estimates did not come from the Highway Department but from local officials. As far as the public was concerned, however, they might as well have come from the Highway Department since they appeared in the paper and were not challenged.

Because the interested public felt it was not finding out enough from the Highway Department, two organizations formed. The Bayway Area Citizens Group came into being in 1964. Some members talked of a "march on Trenton" but when a delegation visited the Highway Department headquarters they were evidently satisfied that the Highway staff was not withholding any information. The Property Owners, Businessmen and Residents of Bayway, an organization presided over by Paul Leuser, the same individual who was also president of the Bayway Area Citizens' Group, appears to have had not much impact on the decision-making. When the Highway Department finally made public a timetable for property-taking and construction in January, 1965, which gave tenants 90 days to vacate their dwellings, both of Paul Leuser's organizations applauded the schedule.²⁴ On March 20, the same year, the Highway Department advertised the

²²Newark Evening News, August 21, 1963.
Elizabeth Daily News, August 5, 1964 and August 26, 1965.

²³Newark Star Ledger, June 27, 1963.
Elizabeth Daily News, September 18 and December 23, 1964.

²⁴Elizabeth Daily News, January 27, 1965.

construction work for this first project for bids.

The pastor of St. Theresa's Church, Dr. Stanley Stachowiak, became alarmed in spring 1965 about the highway about to be built and its impact on the parochial school. He feared that the increased traffic on Route 1, after 278 fed into it, would make it practically impossible for children to cross it. He met with the mayor and the city engineer of Linden who then in turn asked the State Highway Department to consider building a pedestrian underpass.

Three families did not leave their apartment in time because they could not find housing to move into at the \$50 rate they were paying and could afford. The Highway Department evicted them in March, 1965.²⁵

In late 1965, with construction well under way, another school became aware of the highway's impacts. The Holloran School 22 found itself encircled by ditches and moving construction equipment so much so that it became unsafe for children to make their way to the school on their own. City and County officials hurriedly met with the contractor in an effort to alleviate the problem. Some children, as a result, were bussed to the school; but this, it was felt, would not suffice as a long-term solution.

XII.B.2 Traffic Issues

Interstate Route 278 can be viewed as a high-pressure pipe line carrying a great volume of automotive traffic.²⁶ If this pipe line, instead of being connected to a network of other pipe lines, were cut off,

²⁵Elizabeth Daily News, March 20, 1965.

²⁶In 1966 it carried 21.2 million cars.

it would disgorge its content of cars onto the landscape. As long as Route 278 was not completed to connect across all the northeast to southwest running expressways, the community at the temporary terminus of 278 could expect to be inundated with traffic.

In fall 1964 as the completion of the Verrazzano Bridge drew near, the Elizabeth officials criticized the State Highway Department for being behind schedule and not having completed the 1 1/2 mile segment of 278. As it was, Route 278 in effect ended in Elizabeth's Bayway area; had the 1 1/2 mile segment been completed, the route would have ended in Linden rather than in Elizabeth -- and Elizabeth's problems would have been solved. When the Verrazzano Bridge opened in November 21, 1964, our pipe line became plugged into a source containing an infinite number of cars and began spewing this traffic over the landscape of its unfinished end. As predicted, the streets in the Bayway area became clogged with bumper-to-bumper traffic. One Sunday afternoon, when an elderly man died of a heart-attack while sitting behind the wheel of one of the many trapped cars, the papers made the most of it. They included the incident in their stories of the now very regular traffic tie-ups in such a way that a reader got the impression that the man really was in the stalled traffic for so long that, while he had been fine when he started his short trip, he had been held up so long in the traffic that he died of old age.

The State Highway Department hoped that the city would ban all on-street parking in the Bayway area to alleviate the problem. It threatened that if the city would not enforce a parking ban, the state might do so. If parking by the residents had to be prohibited, the city would,

of course, prefer the state to carry the burden of instituting such an unpopular measure. In fact, Elizabeth's mayor Dunn could take advantage of this situation; he demonstrated his concern for his Bayway constituents by ordering his city police to remove the NO-STOPPING, NO-PARKING signs when the state police erected them. Even though in November 1964 City Council had criticized the Highway Department for not getting 278 finished on time, in December it tried to hold up the highway construction funds as a means of putting pressure on the Highway Department to get it to provide relief for the city's streets that were being inundated with cars.

The State Highway Engineer, Palmer, who had not seen fit to discuss the traffic problems that Route 278 would create for Elizabeth with the city officials before this, finally, in response to the city's removal of his no-parking signs, came to Elizabeth to work out a solution with the city officials in February 1965.²⁷ A compromise of a limited parking ban during the crucial hours was found to be acceptable.

XII.C. Route 278 Linden to Springfield

The second segment of the 278 extension covered the area between Linden and Springfield. (See Figure XII-3 again.) This area consists of attractive residential communities, and any highway through there is bound to violate some of them. The governments of these townships on one side,

²⁷Palmer's telegram to Dunn, asking for a conference was completely unlike the typical interchange that had been taking place between city and state officials. It read in part: "We feel that our joint cooperative intent and mutual realization of the facts will resolve the overall situation amicably."

Bayonne Times, February 23, 1965.

and the Highway Department on the other side, became the chief actors in the Route 278 extension decision-making process for the second segment. All actors who had some interest in the Route 278 extension appear to have agreed on two points:

- 1.) There existed a need for a highway link in the general direction and location of the proposed highway.
- 2.) Such a highway would have impacts on the local environment which would be disruptive and impose hardships on some people.

Public statements by the various actors, however, did not always suggest that this kind of concensus existed.

Ever since the Route 278 extension was put on the New Jersey Highway plan in 1957, officials of the municipalities lying between Linden and Springfield worried about the impact the highway might have on their towns. Starting in the late 1950's, the town governments tried to find out from the Highway Department just where the highway might be located. The Highway Department, in line with its general policy, gave out no information about its early studies. As late as 1963, the State Highway Engineer assured the Union County Freeholders "that Route 278 will not extend beyond Route 1 in Linden (i.e. the first 1 1/2 mile segment) now or in the foreseeable future".²⁸

The municipal governments, however, became convinced that the Highway Department was studying alignments for the second segment and, because of the Department's denials, came to distrust any future statements made by the State Highway Department. This distrust expanded and became the basis for a general lack of confidence in the Highway Department

²⁸Elizabeth Daily Journal, May 28, 1963.

staff's professional abilities; throughout the period from 1962 to 1969 there have been intermittent demands -- and some efforts -- on the part of the municipalities to accomplish on their own initiative the Highway Department's job.

But, this did not really work out either. While the towns employed consultants now and then to study the impacts of various proposed alignments, their hearts never were completely in the task of determining the traffic service needs of the area and then finding the best alternative solution to satisfy that need. Each of the municipalities was more interested in opposing and proposing specific alternative alignments; invariably, they opposed alignments through their own communities and felt free to propose alignments through other communities.

The town of Roselle suggested as early as 1962 that the County Freeholders engage a consultant to study the feasible alignment of 278 through Union County and its impacts on the communities in the right-of-way. When, in 1963, the highway alignment for the first segment to Route 1 in Linden was established, Roselle officials -- finding the big automobile pipeline pointing their way -- asked their counterparts in the neighboring towns for help. Roselle Mayor Argyros sent a telegram to the Linden city government asking them not to accept any proposals²⁹ from the state because doing so would do "irreparable damage" to the town of Roselle.³⁰

²⁹The state Highway Department does not have to have a city's approval of plans for a proposed highway in order for the Department to proceed with implementation. They do, of course, like to have the approval. If the towns actually had a veto power, Roselle could simply have cast its veto and might not have needed to drum up allies to produce a "de facto" veto.

³⁰Newark Evening News, September 13, 1963.

When Governor Hughes, in January 1965, announced that the Highway Department now had a consulting firm studying a number of alternative alignments through Roselle, the Roselle mayor asked the mayors of all other Union County townships to help him shift the location of the highway from where he believed the Highway Department to be planning it -- i.e. through Linden, Roselle, Roselle Park, Kenlinworth, Union, and Springfield -- to a more northeasterly route, i.e. through Elizabeth, Hillside, and Union. The City Councils -- as well as some civic groups -- of Roselle Park, Kenlinworth, Union, and Springfield promptly joined Roselle in protesting an alignment through their towns.

In February 1965, Highway Department admitted that it was studying a "brush-stroke" alignment through there but suggested that the towns' concern with the highway was premature because the Department's studies would not be completed for another six to seven months. This prompted some community organizing. Roselle Park City Councilmen Cacosa and Micick responded by forming a citizens' group dedicated to keeping the highway out of their town. Mayor Decker of Roselle Park, a few days later appointed a committee³¹ within City Council to spearhead the fight against Route 278. Mayor Stadden of Roselle was asked by his Borough Council to form a "joint action committee" to fight the highway. Springfield promised to cooperate with the other boroughs which were interested in pushing the highway farther to the northeast.

During February, a number of mass meetings were held in the several communities in the "brush stroke" alignment right-of-way. The meetings,

³¹Chairman: Fred C. Colucci.

sponsored by the Borough Councils, were well attended by crowds of enthusiastic anti-highway residents. While some information was disseminated, such as Mayor Stadden's proposal for a northwesterly alignment along the Elizabeth River, their chief function appears to have been to make the general opposition to the highway more visible and audible.

At a community mass meeting on March 3, Frank Parker, assistant directing engineer of the State Highway Department, announced that the Highway Department had as many as twelve different alignments under study, that it might well design a route which would take the highway farther west. Immediately the mayors of Garwood, Cranford, Westfield, Mountain-side and Clark³² joined the opposition of the "brush-stroke" alignment communities.

During March the communities in the alignment proposed by Stadden, i.e. Union and Hillside also began holding mass meetings. Much like the meetings held in April along the "brush-stroke" alignment, the meetings were essentially rallies. All the people in attendance were likeminded; they wanted no part of the highway in their own community. Borough Councillors, mayors, and other community officials such as the Township Attorney, the Fire Commissioner, the Finance Commissioner, the City Engineer, and the Police Commissioner, typically addressed a crowd of several hundred home-owners. These officials vowed to "carry the fight to Elizabeth, Trenton, and even Washington".

³²The mayors of these communities expressed surprise at the disclosure that the Highway Department had been working on alternatives that might affect any of them because, just in the week previous to disclosure, a Cranford official had been in Trenton but was unable to get any alignment information.

The highway opposition had so far been largely an effort on the part of each community to keep the highway out of its territory. This strategy had resulted in assuming that the highway would have to follow one of two alignments, the "brush-stroke" route or a route along the Elizabeth River. Elizabeth had been vacillating in its stand on the alignment and could thus, in March 1965, not be relied on to oppose the Elizabeth River alignment. Newark, it had to be assumed,³³ would not oppose that alignment either. Linden, by 1965, had traffic pouring into its streets off the Goethals Bridge, and the 1 1/2 mile segment into Linden was under construction. That portion's completion would still leave the pipeline's terminus in Linden; Linden's officials, therefore, were interested in getting the second segment of Route 278 built, on any alignment. Thus, the fight that resulted was one between the two sets of communities, each consisting of the boroughs in a right-of-way excepting Elizabeth, Newark, and Linden.

The borough of Union, finding itself in the unfortunate position of

³³The City of Newark was getting the services of a consulting engineer who prepared traffic engineering, financial, and demographic data which suggested that a route along the Elizabeth River would be a desirable alignment for the state as well as for the City of Newark. The consultant, Warren Stadden, was at the same time the mayor of Roselle, the most active community in the set of boroughs in the "brush-stroke" alignment pushing for an alignment such as the Elizabeth River. Stadden thus played two separate roles, both of them being positions of considerable power. Since he argued for the same solution in both roles, officials in Hillside and Union raised the question of conflict of interest. Roselle did not need to worry about this because if, in fact, there was a conflict of interest only Newark could suffer, not Roselle. Newark, it appears, was confident that the solution he was proposing was also in their best interest, i.e. that he was not using his professional influence in Newark for the benefit of his political constituents in Roselle. Newark City Council expressed confidence by renewing his contract³⁴ in the middle of the controversy.

³⁴Elizabeth Daily News, April 8, 1965.

having to expect being violated by either of the two alignments, cast its lot with Hillside. Since the fight had thus far turned out to be more of a fight between the boroughs in the "brush-stroke" alignment against the boroughs in the Elizabeth River alignment, Union could best improve the chances of changing the fight to one of all boroughs vs. the Highway Department by increasing the chances of stalemating the then existing boroughs vs. boroughs fight.

State Highway Engineer Palmer, in his effort to keep not only the Department's studies under wraps but also to keep the public from becoming too confident in some of its own assumptions, assured Union mayor Bier-tuempfel by telegram that Roselle mayor Stadden had no reason to assume that the Highway Department would not run the highway through Roselle. It appears that this telegram brought a fundamental change into the relation between the set of boroughs favoring the "brush-stroke" alignment and the set of boroughs favoring the Elizabeth River alignment. Within a week, the chief actors from the two opposing alliances met and agreed to present a united front against the Highway Department, opposing any alignment. The communities which thus committed themselves were: Union, Hillside, Elizabeth, Linden, Roselle, Roselle Park, and Kenilworth.

After this strategic change in the actors' perception of who was the antagonist, there was a flurry of activity on the part of civic groups and individual residents. Hillside Against Land Takeover (HALT), a newly formed organization "to fight further encroachment by highways 278 and 78 on Hillside", held mass meetings and started a campaign to have residents talk to Congresswoman Dwyer, who had taken a stand for the Elizabeth River

alignment. They asked her to reconsider her position.³⁵ HALT also circulated a petition and gathered over 1,000 signatures in Hillside expressing opposition to highways. Hillside and Union officials met with Under-Secretary of Commerce, Clarence Martin, in an effort to persuade him that the federal government should not let the State Highway Department build a highway which would seriously disrupt local communities.

A fear, which most individual residents had, of being the unlucky victims of a highway -- even a badly needed highway -- coming through their neighborhood and inflicting an inequitable share of its costs on some of them -- and since no specific alignments were known, no one knew on which ones -- now became mirrored in the attitudes of the municipal officials.

In 1966 New Jersey opened its Department of Transportation. Its Commissioner of Transportation, David Goldberg, took on the role as top highway decision-maker in the state and thus inherited the Route 278 controversy. In a speech in mid-June 1967 he hinted that he was not convinced that the highway would be built when he suggested that, due to the strong local opposition to Route 278 and the resulting delays, it was possible that the state would fail to meet the deadline for roads on the interstate system.

In late June 1967 the Department of Transportation finally unveiled two alternative alignments that the Department felt would meet their standards and were feasible. Both routes cut through Linden, Roselle,

³⁵ Representative Florence P. Dwyer had the bad fortune of taking the fairly unpopular stand for the Elizabeth River alignment of the highway -- in line with Elizabeth Mayor Dunn's own position -- only to see Dunn switch his stand shortly thereafter.

Roselle Park, Kenilworth, Union, and Springfield.

During 1966, the anti-highway leaders had found it difficult to keep up the active interest of much of the population, but, with specific alignments now being proposed, a new wave of indignation rose and participation was more spontaneous. Mass meetings were held in Union, Springfield, Kenilworth, and Roselle; motorcades were staged; letters were written, and petitions were circulated. The Galloping Hill Civic Association made an effort to coordinate the highway opposition. As was the case all along, community officials led the fight against the highway; never before, however, had they shown the same vigor. The meetings were now usually called by such groups as the Galloping Hill and the Sayrebrook Civic Associations; borough officials then addressed the crowds. Union Police Commissioner James Canlon urged people to protest; Springfield Commissioner of Public Safety (!), speaking of stopping the highway, said: "We might lie down in front of the bulldozers . . . if necessary . . ." ³⁶

The Hillside Hurden-Looker Post 50, of the American Legion, went on record as being opposed to the proposed alignment of the highway.

One danger of having very specific alignments presented by the state was that all the residents who did not find themselves in the right-of-way would lose interest. Roselle Park Councilman Miciek, realizing this, linked the highway to something that just about the whole borough was interested in. The borough had planned to build a large public swimming pool; Miciek now made the construction of this pool conditional on the defeat of highway 278. He argued that, because the borough would lose five to six million dollars in taxable property, the borough could not

³⁶Elizabeth Daily Journal, Late summer 1967.

afford the pool, and he would therefore have to vote against it, if the highway came.

XII.D. The Defeat of the Highway

Even though one can find a headline in newspapers as far back as 1963³⁷ claiming that the Highway Department was about to give up on ever building Route 278, the Highway Department and later the Department of Transportation had every intention of constructing the highway and was proceeding in its normal location-design process. The Highway Department's public consists of the highway users, and the Department spokesmen always said that they only build highways that the public wanted them to build. Since almost everyone in the state -- and many an out-of-stater -- is a highway user, the highway's benefits tend to be spread thinly over a large public while the people who oppose a highway are relatively few but are impacted heavily. Because of this unequal distribution of negative impacts, the Highway Department has become accustomed to some opposition; in fact, it expects it. Having built some 700 miles of highway in New Jersey thus far, the Highway Department did, however, also expect some local support.³⁸ When the communities responded with the most coordinated all-out opposition to both alignments offered in June 1967, the Department of Transportation had to begin thinking seriously about statements to the

³⁷Headline in Newark Evening News, December 22, 1963: "State Writing Off Plans for Route 278 Construction".

³⁸In 1967 no local actors would speak out openly in favor of the highway even though in 1957 such groups as the Fifth Ward Republican Club of Elizabeth publicly asked for a highway through the city.

effect that they would only build highways which the public wanted. Local officials from Union County and Union Borough had, on one of their many treks to Washington, received hints from the Bureau of Public Roads that the federal government would not necessarily oppose removing Route 278 from the interstate highway system - provided the request came from Governor Hughes.³⁹

The Route 278 extension had been expected to cost approximately \$90 million; since it was an interstate route, the federal government was to pay 90% of this cost. State governments in all states try to get as much outside federal money into the state as possible. Thus, the Governor and the various state agencies found the idea of not building Route 278 about as attractive as any other scheme for losing \$81 million. One way to keep the money - or at least most of it - coming to New Jersey and at the same time satisfy the Union County communities, of course, would be to take Route 278 off the interstate system and put some other highway elsewhere in the state onto the interstate system.

Congressman James J. Howard, the Governor's chief ally in Congress, approached Federal Highway Administrator Bridwell with the request to add an east-west expressway between Asbury Park on the shore and Trenton⁴⁰ to the interstate system. It would traverse about 37 miles of almost

³⁹E. H. Swick, speaking for Federal Highway Administrator Bridwell, passed this opinion on to acting Union mayor Koloman G. Kiss and some other local officials.

⁴⁰This highway has been called the Trenton to Shore Highway, the Asbury Park Expressway, the Central Jersey Expressway, and when it was finally adopted as part of the interstate system, it was given its interstate designation: I-195.

completely rural area; its chief function would be to provide a convenient link between Trenton and the recreational area along the Atlantic shore. There was a strong demand for this highway on the part of the few communities that it would affect. Governor Hughes and Congressman Howard both had promised during their 1965 campaigns that they would work for the construction of this expressway.

Because there was no additional mileage of interstate highway that the Bureau of Public Roads could allot to New Jersey, Bridwell recommended that Howard see if the New Jersey Department of Transportation did not have some interstate mileage that it was willing to give up. Provisions in the highway legislation existed which made it possible to substitute a highway link, of some given length and currently not part of the interstate system, for a highway link of equal or greater length and currently part of the interstate system.⁴¹ Transportation Commissioner Goldberg expressed, by late summer 1967, a willingness to give up the Linden to Springfield segment of Route 278. But, the two highways could not really be substituted because the Trenton to Asbury Park Highway would be about five times as long as the 278 extension. Substituting one for the other would, in effect, make a net addition to the interstate mileage of about 30 miles.

Because the Trenton to Asbury Park Highway would be built through a rural area - whereas the Route 278 extension had only developed urban right-of-ways to choose from - the former would cost less than the Route

⁴¹The substitution would, of course, have to let the resulting interstate system still meet the basic criteria established by Congress.

278 extension even though the latter was only a fraction in mileage of the former. Transferring the seven miles authorized for 278 from the interstate system to a seven-mile segment of the Trenton to Asbury Park Highway would only keep about 18 of the 90 million anticipated federal dollars. Besides this, a seven-mile segment of the Trenton to Asbury Park Highway could not qualify as a legitimate highway link; either the entire highway would be added to the interstate system or nothing.

With local opposition to 278 mounting to a crescendo in 1967, the Bureau of Public Roads (BPR) was instrumental in bringing the planning to a final halt by refusing to back up the New Jersey DOT's hard stand against the local officials from Union County. Federal Highway Administrator Bridwell, instead of telling these officials who went to see him in summer 1967, that the interstate system could not be tampered with at this late date, hinted that it could indeed be changed. In fact, because he felt that the state had done an inadequate job of involving the public in its highway planning process for 278, he insisted that the New Jersey DOT would have to come to terms with the local communities before the BPR would accept any alignment. Transportation Commissioner Goldberg saw this attitude more as weakness on the part of the BPR, an unwillingness to take an unpopular stand against a few vociferous special interests.

When, in late summer 1967, Goldberg proposed to drop 278 from the interstate system and add the Trenton to Asbury Park Expressway instead, Bridwell let him know that present legislation did not permit the switch but that the proposal was "interesting" and that, while it could not be

accepted, it was not rejected.⁴²

It became clear that what was needed for a relaxation of the constraints which 1) made it impossible for Governor Hughes and Congressman Howard to fulfill their campaign promises of building the Asbury Park Highway, 2) for the New Jersey DOT to keep the \$81 million, and 3) for Route 278 to be taken off the map, was new federal highway legislation. The New Jersey Department of Transportation, the Governor, New Jersey Congressmen, the Federal Bureau of Public Roads, the Federal Department of Transportation, the Association of State Highway Officials (ASHO), and eventually even the President of the United States - they all worked together to write the necessary legislation, to get it passed by both houses and signed by the President in a total elapsed time of less than four months.

In early October, 1967, Congressman Howard introduced a bill which would permit the switching of interstate highway segments on dollar terms and would add 10%, i.e. 410 miles,⁴³ to the total interstate mileage.⁴⁴

⁴²Bridwell's letter, September 18, 1967, to Goldberg.

⁴³Some legislators were always trying to expand the 41,000 mile interstate system by substantial amounts of additional mileage. At this time, Republican New Jersey Senator Clifford Case was working for raising the mileage limit to 50,000 miles. Legislators and administrators who felt that the highway program was already too big opposed such attempts with vigor. Since Bridwell, for one, was strongly opposed to such expansion of the highway program, and since some expansion was necessary because money would be transferred from costly, short links to cheaper, longer links, the Howard Bill included only very marginal expansion. The expansion, however, had to be large enough to permit several other states to take advantage of it - if the bill was to get the necessary support - and small enough not to alarm the watchful opponents of highway expansion.

⁴⁴Red Bank Register, October 9, 1967.

Federal money being the subject of the bill, Bridwell's support was essential and was therefore eagerly sought by the other actors; he met with Bridwell, Howard, and Governor Hughes and gave the bill tentative support, saying it made "eminently good sense".⁴⁵ After the mileage expansion of the interstate system was reduced to 200 miles by the House Subcommittee on Roads, that body passed the Howard Bill unanimously. The bill was so popular that 12 of the 14 Republican members on the House Public Works Committee co-sponsored; by November 16, Howard had 20 co-sponsors.⁴⁶ Because the 200-mile expansion of the interstate system would limit the number of states which could ever take advantage of the bill, the Senate balked momentarily. While the people who were working for the bill's passage, i.e. Hughes, Howard, Goldberg, - would have liked a general expansion of the interstate program, they did not want to risk this special-purpose bill on that broader issue. They felt that a substantially larger mileage expansion clause in the Howard Bill would have prevented its passage. After Hughes asked President Johnson on November 26, to help get the legislation through the Senate, that body passed it on December 5, and the President signed the bill January 9. By the end of March 1968, the Trenton to Asbury Park Expressway was officially made part of the interstate system, and Route 278 was removed from it.⁴⁷

⁴⁵Trentonian, October 10, 1967.

⁴⁶Red Bank Register, November 9, 1967.
Asbury Park Press, November 10, 1967.
Perth Amboy Evening News, November 16, 1967.

⁴⁷Perth Amboy Evening News, December 5, 1967.
Red Bank Register, March 21, 1968.

XII.D.1 After the Defeat

Since the local officials - and their constituents - succeeded in defeating Route 278 in fall 1967 there has been more and more public complaining about the fact that the State Highway Department is not doing anything about the mounting problems of traffic congestion in Union County. The Department of Transportation interprets these symptoms as the early signs of a much greater regret - which is yet to come.

The Union County Planning Board decided in early November 1967,⁴⁸ at the time the Howard Bill was being put together in Washington with the effect of eliminating Route 278, that their "wait and see" attitude had lasted long enough. They voted to petition Congress to freeze highway funds to prevent the switch of funds from 278 to the Trenton-to-Asbury Park Highway long enough that an independent engineering study⁴⁹ could be made of the need for 278 and its possible impact. At about the same time Union Township Engineer Richard Mixer discovered that the State had not built any new highways in Union County for the past 40 years. He suggested that some new highways were needed to alleviate traffic congestion.⁵⁰ His colleague, Union County Traffic Engineer Walter Gardner waited until January 1968 to say: "One wonders how much worse (the traffic congestion) can get (in Union County) before Trenton takes some real

⁴⁸Plainfield Courier News, November 11, 1967.

⁴⁹This was precisely the kind of study the Union County Freeholders had, at the advice of their County Engineer James F. Davison, refused to do in 1963 when Roselle Mayor Argyros had suggested it.

⁵⁰Elizabeth Daily Journal, November-December, 1967.

action."⁵¹ One Union County Freeholder expressed surprise when, in December 1968, "in reviewing the listing of anticipated road construction and improvements to be financed by the transportation bond issue,⁵² I find no proposals for alternatives in Union County for the now discredited Route 278 ... But the need ... has not diminished."⁵³ While the editorials of the area's leading newspapers had never fully sympathized with the highway opponents, by late 1967, with 278 headed for defeat, they pointed out with more directness than before that a highway was indeed needed.

The implementation of the Trenton to Asbury Park Expressway and the un-mapping of 278 both constituted gains for Governor Hughes; he was able to satisfy both of the big political pressure groups. Even the New Jersey Department of Transportation may have gained something from the outcome. Goldberg, and his predecessor as head of the state's highway decision-making machinery, had always said that they would not build a highway unless the people wanted it. Well, now they had proof that those were not idle words.⁵⁴ He and his department had gained some credibility.

⁵¹Elizabeth Daily Journal, January 18, 1968.

⁵²The 990 million dollar bond authorization requested in 1968 by Goldberg in the New Jersey Master Plan for Transportation.

⁵³Newark Star Ledger, December 13, 1968.

⁵⁴Goldberg used the Union County case for this purpose when he campaigned for the \$990 million bond authorization for the Department of Transportation in 1968.

Elizabeth Daily Journal, October 7, 1968.

XII.E. Contacts Between the Highway Agency and the Public

To get a better understanding of the effects the defeat of Route 278 had - and will have - on the Department of Transportation's future relations with local communities which are "recipients" of expressways, we need to look at a sampling of the contacts between the state highway officials and the public.

Throughout the winter 1964-1965, the Highway Department insisted that it had no plans for 278 beyond Linden. Governor Hughes, at one point, gave out the contradictory information that some alternatives were being mapped.⁵⁵ Whenever community officials were beginning to trust in some rumored alignment the Department released enough information to dispel the growing sense among the public of really knowing what the Highway Department was doing.⁵⁶

The Highway Department's reasons for its policy of secrecy during the early planning phase was never understood by the public. Unfortunately, to an outsider, a policy of secrecy motivated by the desire to prevent the public from being taken advantage of, looks exactly the same as a policy of secrecy motivated by the desire to take advantage of the public. With this kind of difficulty confronting the Highway Department, the rude manner it displayed toward the community leaders made a deep distrust on the part of the public all but inevitable. For example, when Freeholder Tiller invited State Highway Engineer Palmer to address a meeting of freeholders and municipal officials to discuss Route 278

⁵⁵Elizabeth Daily Journal, January 28, 1965.

⁵⁶Elizabeth Daily News, March 4, 1965. (Cont.)

in spring 1965, Palmer declined, saying it would be "a waste of time".⁵⁷ Springfield Committeeman Jay Bloom complained that his committee's letter to Palmer requesting information went unanswered.⁵⁸ After the Governor had disclosed that a consultant engineering firm from New York⁵⁹ was making some studies for 278 alignments, the Highway Department refused to disclose the terms of the contract. The City of Roselle, in 1965, considered suing the state to make public the consultant's contract only to discover that Hughes legally could - and in 1963 did - invoke an executive edict which made it legal to keep such information from the public.⁶⁰

The Highway Department's policy of dealing with the public at arm's length made it not only difficult for the local officials to find out information, it also made it difficult for these local actors to make an input into the Highway Department's planning process. The local officials were never satisfied to choose between two alternatives offered by the state and did make substantive recommendations on many occasions. Knowing that the state studied more than the two alignments which were put before them, they would have liked to see all of them and be themselves convinced that these other alternatives really were inferior and did not merit further consideration. Besides seeing all Highway Depart-

Newark Evening News, March 24, 1965 and April 21, 1966.

⁵⁷Newark Evening News, April 2, 1965.

⁵⁸Newark Evening News, February 24, 1965.

⁵⁹Frederick R. Harris, Inc.

⁶⁰Newark Star Ledger, October 22 and 29, 1965.

ment alternatives, they had ideas of their own for alignments; they want that their own alternatives be given the same consideration any of the Highway Department generated alternatives received.

If the Highway Department had been less rude in its dealings with the local actors, an observer might be led to accuse the Department of being paternalistic; the Department's attitude appears to have been that it knew the public's needs and wants well enough that it did not need a close consulting relationship with the local actors.

When Elizabeth Mayor Bercick asked Governor Hughes to help him get a better alignment than the Highway Department was working out, Hughes told him that he should work out an engineering proposal and then submit it;⁶¹ i.e. the chief executive of a city through which a highway was being planned could not ask the State Highway Engineers to study another alternative. Local officials, sometimes entire borough councils, made dozens of trips to Trenton, the state capital, in their usually fruitless efforts to find out what the State Highway Engineers were planning and to get the state to consider the alignment that they felt had merit. While most of the actual alignment proposals made by local officials were in most cases about as disruptive as the Department's proposals, some cases would not serve the traffic needs, the Highway Department did not feel it necessary to demonstrate to the local officials that their suggested alignments were being studied and were only dismissed after due consideration. The local officials then resorted to opposing the state proposals in the hope of forcing the Highway Department to listen. To make themselves

⁶¹Elizabeth Daily Journal, December 17, 1963.

heard, they staged mass meetings. These gatherings were, without exception, designed to communicate by their existence - rather than by the things which were said there - to the state that the public wanted to be listened to.⁶² At these meetings, the people were always asked to write to their legislators and to the Governor to make their feelings known.

XII.E.1 The County's Involvement

The County Freeholders had not played any significant roles in the controversy. In 1963 they rejected outright the idea of starting a study of their own which might have put them in a position to plan for the traffic services needed and for preventing hardships to the local communities. The Eastern Union County Chamber of Commerce finally persuaded the Freeholders to establish a Planning Board in the mid-1960's. As long as the borough officials viewed the conflict to be one of boroughs, the freeholders felt they could not take sides.⁶³ When in April 1965, however, the officials representing the two sets of boroughs combined into one force against the Highway Department, the freeholders joined the borough officials. Freeholder Tiller announced on that occasion that he would seek all legal means to prevent the building of the highway unless the State Highway Engineer could prove its necessity.

⁶²Newark Evening News, February 1, 1965.
Elizabeth Daily Journal, March 4, 1965.

⁶³As late as March 1965 the freeholders agreed not to take a stand on 278 - "pending further study".
Elizabeth Daily Journal, March 19, 1965.

One year later the Union County Planning Board was ordered by the freeholders to give top priority to studying the highway alignments through the county. The planners, however, could not get the information they wanted about alignments being studied. In July 1966 they asked the County Board of Freeholders "to join them in legal action ... to compel ... the Highway Department to place plans for the 278 route at their disposal."⁶⁴ Nothing ever came of this. And, when in July 1967 the Department of Transportation released its two preferred alternatives, the Planning Board adopted a "wait and see" attitude, taking no stand. Alfred Linden, the Director of Planning, announced, however, that the Department of Transportation had impressed him that 1) the highway was necessary, that 2) the highway could not be stopped and the rather curious conclusion that 3) homeowners should not rush to sell.

Freeholders Ahern and Cuchie both proposed separate solutions of their own to borough officials and to the Board of Freeholders. Like other alternatives that were proposed from time to time, both were attempts to push the highway out of the territory - this time out of the county. Pushing the highway that far north, it did not satisfy the traffic needs, and yet was no more implementable than the alternatives under consideration.

The Board's increasing involvement from 1965 on could be explained, at least in part, by the appearance of rumors in the papers that some of the freeholders' residences were located within some of the rights-of-ways being studied by the Highway Department. When the Department, in July 1967, disclosed the two preferred routes, Freeholders Ahern and

⁶⁴Elizabeth Daily Journal, July 9, 1966.

Cuchie found that one of the routes threatened Ahern's home and the other threatened the home of Cuchie - just as it had been rumored in the papers for over a year. Within weeks the Board established a subcommittee to fight not just one of the alignments but the whole highway.⁶⁵

XII.E.2 Advocacy

Roselle Mayor Argyros had tried since 1962 to get either Union County or Roselle together with some other boroughs to hire John Clarkson, a consulting highway engineer, as an advocate. In September 1963 Roselle Town Council finally allocated \$5,000 and signed a contract with him. He was to "conduct an investigation to ascertain the extent and availability of existing engineering data ... relative to any alternative route which the state is considering."⁶⁶ Later that fall he reported that it would cost \$100-150,000⁶⁷ to develop an alternative route to the path which, according to rumors, the Highway Department intended to use.⁶⁸ Roselle obviously could not raise that much money for the purpose since it had taken over a year to decide spending \$5,000 for

⁶⁵It is difficult to gauge the motives of any actor. The fact that a particular actor's involvements could be explained by a particular motive does not mean that it, in fact, did motivate him. On the other hand, to omit information about the circumstances of an actor's involvement because it might lead a careless observer to a conclusion which could be wrong, could not be justified either.

⁶⁶Newark Evening News, September 13, 1963.

⁶⁷He estimated that the development of necessary traffic data would require 60% of this budget.

⁶⁸Elizabeth Daily Journal, July 23, 1962.
Newark Evening News, July 12, 16, 30; Sept. 13; and Nov. 18, 1963.

the purpose. There was little chance of cooperation among the communities since, at this early date, they viewed the highway controversy as being a struggle between boroughs. Thus, the notion of countering the State Highway Department's future proposals with professional counter-proposals came to a quick and early end.

Clarkson advised the incoming Republican and outgoing Democratic administrations of Roselle in December 1963 that the most effective measure they could work for would be to change the alignment of the first 1 1/4 segment.⁶⁹ As it stood, it would terminate pointing that cut-off pipeline of traffic right at Roselle which would not only make it almost certain that the second segment would have to go through Roselle, but it also would pour a great number of cars into the borough's local streets in the meantime.

Henry Such Smith, a Roselle resident and President of a Bergen Iron Works in Bayonne, New Jersey, was a self-appointed advocate for the communities of Union County. He had been involved in an unsuccessful fight to prevent the Verrazano Bridge from being built and in other highway controversies. He had, by his own admission, several motives. He was interested in improving the overall highway system, and he wanted to see his own patented steel and concrete highway divider used as much as possible.⁷⁰ Throughout the 278 controversy, he was one of the few

⁶⁹Newark Evening News, December 18, 1963.

⁷⁰He had originally become concerned with highway safety when an acquaintance was killed in a head-on collision. This led him to invent and develop a device which would prevent improper left-turns and the kind of accident his friend had been killed in.

actively involved public opposition leaders making constructive suggestions. Because Smith was an engineer and a respected businessman, he could not be easily dismissed. He proposed the Elizabeth - River alignment in 1963, arguing that the alignment would not only be less disruptive but that it also would be cheaper. Even though, in the long run, it turned out that there was no mechanism which would make it possible for him to make a direct input to the state's highway decision-making process, he wound up convincing many of the local officials that the Elizabeth River alignment was the best route.⁷¹

The city of Elizabeth, as represented by its City Council and mayor, changed its stand on the Route 278 extension more than once. Like many of the other municipalities, the fact that there was a change in the city's administration did not account for a change in attitude. Mayor Bercik accepted the need for a highway but was concerned about the general disruption and the specific hardships it would cause. Mayor Dunn did not hold significantly different views.

With the opening of the Verrazano Bridge to traffic in 1964 Elizabeth and Linden streets were inundated with cars pouring over the Goethals Bridge. As a result these two cities became much more willing - if not eager - to see Route 278 extended to Springfield. It was in this spirit that a Joint Committee of the Elizabeth City Council and the Greater Elizabeth Movement (GEM), an organization of 23 leading industrialists and businessmen, in February 1965, voted to fund a \$65,000 study to develop a 278 alignment along the Elizabeth River.⁷²

⁷¹Newark Evening News, July 1963. Elizabeth Daily Journal, March 5,6, 1965.

⁷²Newark Evening News, February 25, 1965.

Later that year, when the municipalities of Union County managed to stop pushing the highway into each other's territory and began to fight the highway along any route, Elizabeth joined them. Mayor Dunn announced April 15 that Elizabeth would not accept any more super-highways.⁷³

GEM, in the meantime, employed John Graham Association, of New York, as consultants. The plan which was eventually produced called for the construction of a four-lane parkway along the Elizabeth River and improvements to a number of existing streets in lieu of an expressway.⁷⁴ When in fall 1967 the 278 extension's imminent defeat became quite obvious, GEM and the City Councils of Elizabeth and Linden argued that the highway money budgeted for 278 should not be transferred to the Trenton to Asbury Park Highway but should be used to implement their own proposal.⁷⁵ Mayor Dunn by this time had returned more or less to his pre-1965 role of criticizing the State Highway Department for not doing anything about the serious congestion problems that were plaguing the city. Linden City Council adopted a resolution in fall 1967 asking the State Highway Department to proceed with the planning and construction of 278. The vote was not unanimous, however. Councillors from the wards which would be penetrated by the highway voted against the resolution.

⁷³Elizabeth Daily Journal, April 15, 1965.

⁷⁴GEM's plan was programmed to help - and work with - the rejuvenation plans for Elizabeth's Central Business District developed by the Joint Civic Committee.

⁷⁵Elizabeth Daily Journal, November 20 and 24, 1967.

XII.E.3 Rumors

The Highway Department's policy of working out preliminary alignment studies in secrecy, the awareness of the public that something is being done about a highway, and the fact that highway location decisions are of interest to a large and diverse part of the public, - together make a fertile ground for rumors about highway alignments. While it is hardly a system of public information that recommends itself, the public concerning itself with the Route 278 controversy came to rely on rumors. The rumors, it turns out, were remarkably accurate; they represented a much better portrayal of what was really going on than the state's official announcements.

Lacking legitimate information of the Highway Department's activities in connection with the early planning of alignments, the rumors constituted the major source of the public's knowledge. Elizabeth Mayor Dunn, lunching in January 1965 with Port Authority officials found out that they had a map showing 278 extending all the way to Springfield.⁷⁶ This rumor information carried more weight with the local actors than subsequent official statements by Governor Hughes and State Highway Engineer Palmer claiming that there were no plans to carry 278 beyond Linden.⁷⁷

When in 1964 the State Highway Department installed some mechanical traffic counters in Roselle, the community, which had for some time been worrying about Route 278 being built but had always been assured by the state that there were no plans for doing that, immediately interpreted

⁷⁶Newark Evening News, January 13, 1965.

⁷⁷Hughes sent assurances to this effect to Welfare Commissioner Colucci

the counting devices as evidence of highway planning for 278. Stadden called the traffic counting a "very serious breach of faith".⁷⁸ The Highway Department's explanation that the traffic counting is part of their routine, state-wide data gathering was evidently not believed, by Stadden. When in the following winter five traffic meters were discovered again along the generally assumed alignment of 278, the mayor had his police keep track of them.⁷⁹

To say that many of the rumors turned out to be correct is not to say that the public was well informed. As was observed in the California case, the job of informing the public is hard to accomplish even when an agency works hard at it. Preconceptions are hard to change; because most people who spoke up at the June 1963 public hearing in response to the Department's presentation had been expecting an on-grade highway, most of the speakers went right ahead with their demands for an elevated highway even though W. T. Dyckman, the state's consulting engineer, had made it quite clear that the Highway Department in fact intended to build an elevated highway.⁸⁰

of Roselle Park as late as June 1965.

Elizabeth Daily Journal, June 30, 1965.

⁷⁸Elizabeth Daily Journal, July 21, 1964.

⁷⁹Newark Star Ledger, August 18, 1964.
Elizabeth Daily Journal, January 5, 1965.

⁸⁰Newark Evening News, June 27, 1963.

XII.E.4 Politicians

Since the public in question here were a middle-class public, we must assume that the elected state officials did not completely ignore these expressions of opposition to the highway and that the substitution of the Trenton-to-Asbury Park Highway for Route 278 became a very attractive means of satisfying the public.⁸¹ On the whole, however, we cannot help but observe that the actors who took part in the highway controversy - or tried to do so - for strictly political reasons, did not play important roles. Councilmen and mayors who proposed alternatives which kept the highway out of their own constituents' territory but would have been equally disruptive to some other community, were looked upon as parochial interests by the state with good reasons.

Candidates campaigning for local offices typically made no constructive contributions. In fact, the alignment proposals which merely shoved the highway into some other community often originated with electioneering individuals.⁸² Since political candidates who were running against incumbents could advance themselves by putting the current officials into

⁸¹ Some legislators thus pressed might have liked to have the federal BPR - or any other outside agent - impose a decision. But, Senator Harrison Williams, Jr., representatives of Senator Clifford Case, Representatives Dwyer and Gallagher were asked by a number of Union County officials to attend a meeting with the BPR in mid-1967 where the BPR made it clear that the state DOT would have to come to terms with the elected officials before the federal government could approve an alignment.

⁸² For a typical example, Alexander Wrigley, while a candidate for a Linden City Council seat, proposed an alignment for 278 off the Goethals Bridge which kept the highway completely in the City of Elizabeth.

Newark Evening News, July 16, 1963.

a bad light, some such candidates called for investigations of the handling of the anti-highway campaign by their opponents, implying that they were not doing all they could to stop the highway or were even secretly subverting the anti-highway drive.⁸³ During each of the periods that local elections were being held some - though not very vigorous - attempts were made to make the highway controversy a partisan issue. These efforts never bore fruit. Democratic local candidates certainly could not attack the democratic Hughes administration on a partisan basis; local republicans who tried,⁸⁴ were stymied by the fact that the only local pro-highway actors were republican county freeholders and a Republican Club of Elizabeth.⁸⁵ The County Freeholders never did split along partisan lines. When Republican Freeholder Tracy suggested in December 1968 that the highway was still needed, he met bipartisan opposition from his colleagues.⁸⁶

⁸³Nicholas La Corte, GOP mayoralty aspirant in Elizabeth implied Bersick was letting Newark make plans which would be detrimental to Elizabeth, and called for an investigation.

Roselle mayoral candidate Murphy asked for an investigation of the borough's consultant, Alvin Gersen Assoc., for a possible conflict of interest because Gersen also had some work in Linden, a city which was more or less in favor of the highway.

Elizabeth Daily Journal, October 21, 1964 and September 29, 1965.

⁸⁴Loree Collins made a weak attempt at this in spring 1965.

Elizabeth Daily Journal, March 26, 1965.

⁸⁵When in fall 1967 a group of local democrats visited the Governor, republicans charged that the democrats were for the highway. To make sure this notion did not get too far, the local democratic party had STOP 278 bumper stickers printed and handed them out at mass meetings. In small print, the stickers also had the phrase, "paid by the Democratic Party".

Newark Evening News, Fall 1967.

⁸⁶Newark Evening News, December 13, 1968.

The only stand a local candidate for political office could take on the highway controversy and not jeopardize his chances for winning election was to oppose it.⁸⁷ If a number of candidates got into trying to out-oppose each other, they could wind up taking a stand which might be difficult to defend. It was Ahern's candidacy for County Freeholder that made incumbents Caldwell and Fried declare in 1965 that they would oppose the highway because "no need has been shown to extend (Route) 278 west of Route 1 (in Linden)".⁸⁸ One Assembly Candidate, Herbert Baustein of Union, realizing that the electorate had its doubts about how vigorously a candidate would continue to oppose the highway once he was in office endeavored to show his sincerity by buying property in the proposed highway's right-of-way.⁸⁹

⁸⁷When Congresswoman Dwyer did the unpopular thing of coming out in favor of the highway, she became the subject of a sequence of attacks accusing her of "selling out", and she could not maintain her position for very long.

Elizabeth Daily Journal, April 15 and 16, 1965.

⁸⁸Elizabeth Daily Journal, September 28, 1965.

⁸⁹Elizabeth Daily Journal, Fall 1967.

Index of Abbreviations for Chapter XII

- ASHO = Association of State Highway Officials
BPR = Bureau of Public Roads
DOT = Department of Public Works
GEM = Greater Elizabeth Movement
HALT = Hillside Against Land Takeover

CHAPTER XIII

THE INNER BELT IN GREATER BOSTON, MASSACHUSETTS

- XIII.A. The Inner Belt in the North End
- XIII.B. The Inner Belt in the Garment District and Chinatown
- XIII.C. The Inner Belt in Roxbury and in the Fens
- XIII.D. The Inner Belt in the Town of Brookline
- XIII.E. The Inner Belt in Charlestown and Somerville
- XIII.F. The Inner Belt in Cambridge

The "Inner Belt" is a highway whose name has become almost synonymous with the word "controversy" in the Boston area. Even though this urban expressway has been embroiled in a great number of issues, its history will here be presented with the many issues grouped into just six geographic controversies:

- A) the Inner Belt in the North End,
- B) the Inner Belt in the Garment District and Chinatown,
- C) the Inner Belt in Roxbury and the Fens,
- D) the Inner Belt in Brookline,
- E) the Inner Belt in Charlestown and Somerville, and
- F) the Inner Belt in Cambridge.

While the Inner Belt has been part of the Boston area highway plan for over twenty years, at the time of this writing (1969) it is uncertain when -- or whether -- it will be completed.

The Master Plan

The Inner Belt is part of a highway system to which Metropolitan Boston was committed in 1948 with the publication -- and subsequent adoption -- of the Master Highway Plan.

Governor Robert F. Bradford in August, 1947, appointed a planning body, called the Joint Board for the Metropolitan Master Plan, to develop a network of modern expressways for the entire Metropolitan Boston Area. The State Department of Public Works (DPW), in conjunction with the federal government, financed the work of the Joint Board. For the technical work of producing a plan the Board hired an engineering consulting firm.¹

¹Charles A. Maguire and Associates was the chief consulting firm pre-

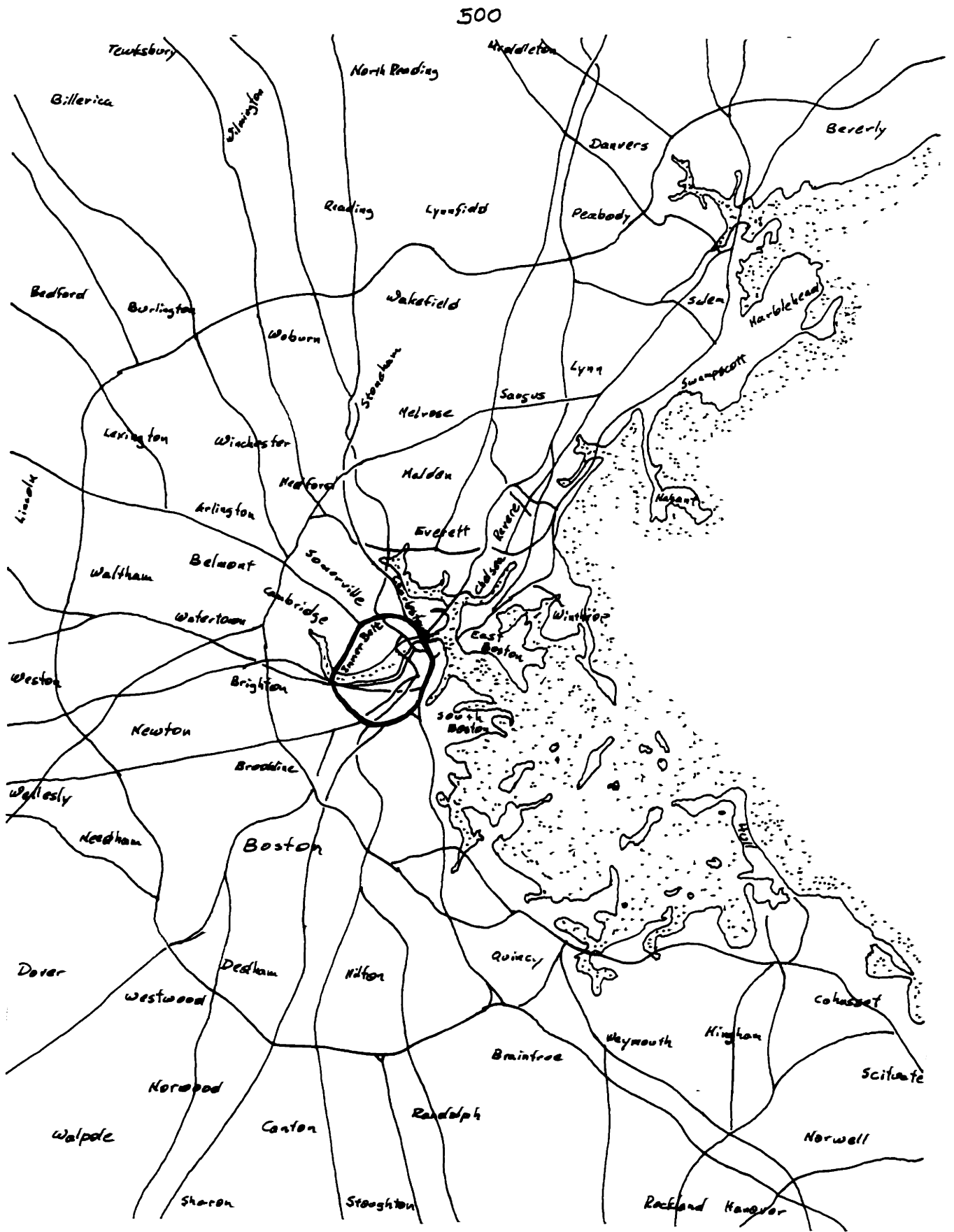


FIGURE XIII-1: The Metropolitan Boston Highway System

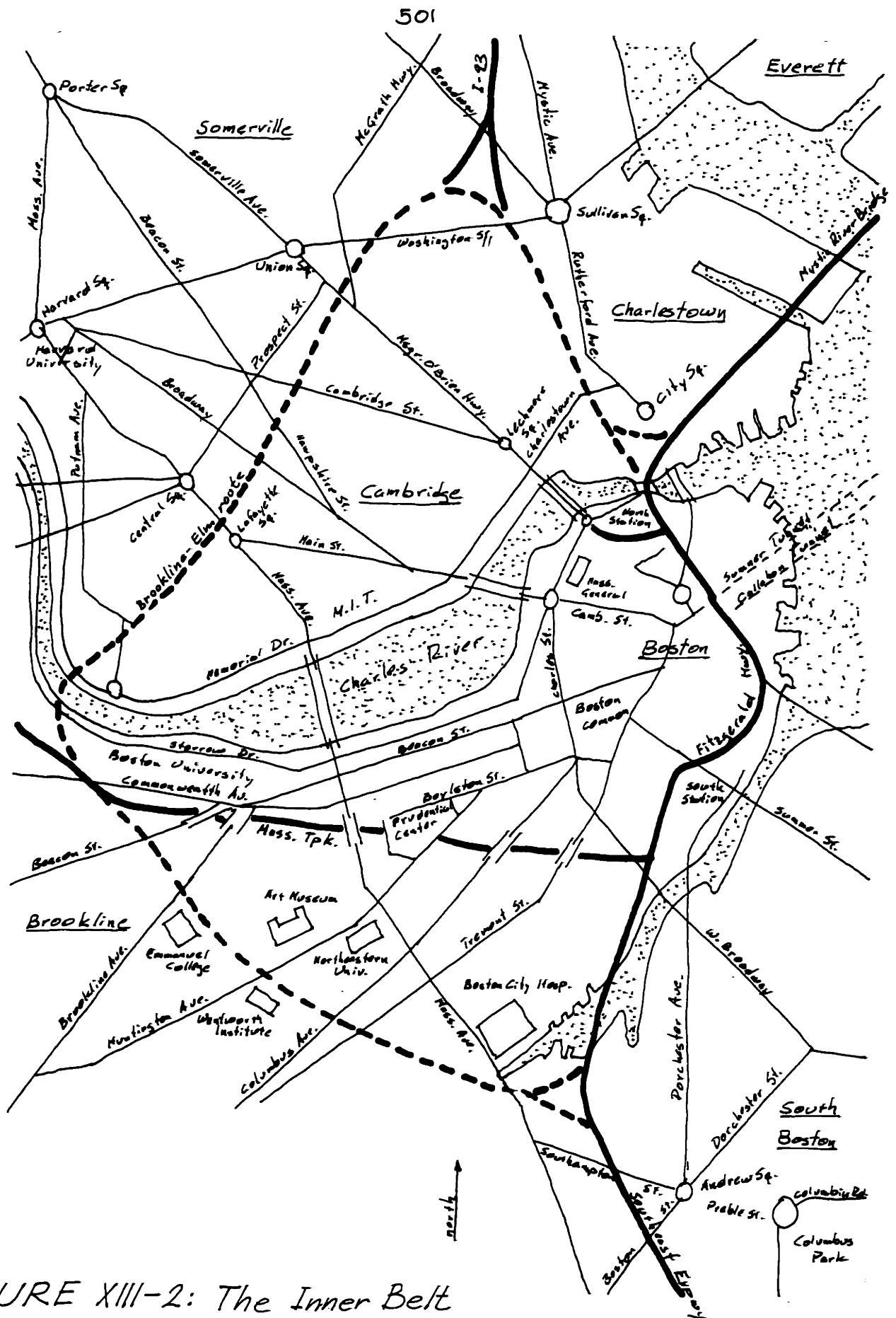


FIGURE XIII-2: The Inner Belt

On February 1, 1948, i.e., within less than six months, the Joint Board presented the Governor with a plan for a highway system. Today, twenty years later, the Commonwealth of Massachusetts is still trying to implement this plan. The proposed network consisted of a system of expressways radiating from the core of the metropolis and was to provide links between Boston and its suburbs, inter-city links between Boston and other New England communities, as well as inter-regional links between Boston and the rest of the country. To provide cross-over links between the radials as well as by-pass routes for through traffic, two circumferential expressways were to ring the city at the radii of approximately one and ten miles respectively from the core. The plan also recommended the use of express buses and the concept of joint right-of-ways with other modes of transportation.

The smaller one of the two proposed circumferential rings, the Inner Belt, is the subject of this study.

The reasons for the Joint Board's ability to turn out a product in such short order were:

- 1) A great amount of traffic data had been collected right after World War II, in 1945; and the Board made use of this information²

paring the report; it, in turn, had the help of two consulting firms, De Leuw, Cather and Company of Chicago and J. E. Grenier Co. of Baltimore.

²The post-World War II traffic survey was carried out by the State DPW, with federal aid. It consisted of interviewing 22,500 people in their homes (all within the current Route 128 area) and of stopping 111,000 vehicles and interviewing the drivers.

The Planning Services Group, The Boston Regional Survey, Transportation Inventory: Chapter IV, Highways, (Boston: Massachusetts Transportation Commission, 1962).

- 2) The Board based its design on an earlier highway plan for Boston, the "Whittier Report".³ This plan was published by the Boston City Planning Board in 1930 and used for its base population and traffic data gathered in 1927. The Whittier Report concerned itself only with the area within the political boundary of the city of Boston.⁴

While the 1948 Master Plan constituted a commitment to a specific highway system⁵ it was an extension of earlier plans⁶ rather than a completely new proposal. The Master Plan was aimed at accommodating projected traffic needs of the future. With the benefit of hindsight, we can today see several wrong assumptions that were made in the traffic projections.⁷ But, because some of the resulting errors partly compensated each other, the total net error in predicted traffic volumes, while still short of volumes experienced thus far, is not as great as

³Report on a Thoroughfare Plan for Boston, by Boston City Planning Board, 1930.

⁴The Whittier Report's chief proposals were:
 -- four lanes of tunnel from the Boston peninsula to East Boston,
 -- a two-level Central Artery,
 -- a Roxbury Cross-town highway.

⁵i.e., a network of radials and circumferentials.

⁶The Whittier Report was not the only plan which predated the Master Plan. As early as the 1920's Cambridge had plans for accommodating more traffic -- particularly truck traffic -- from the Boston University bridge to Central Square. Brookline Street was widened for one block, but rather than widen it all the way, a one-way system was introduced from the end of the widened section north.

⁷Not taking account of the fact that 1945, the year of the DPW's major data-gathering effort, was an atypical year because of the still existing shortage of automobiles and automotive supplies, resulted in underestimating future car and truck traffic demands. The projection also failed to predict the continuing shift in modal split away from the use

it might have been.⁸ In spring 1949, the State Legislature debated the merits of the Master Plan, and various committees within the legislature held committee hearings. Highway engineering and other experts testified before these committees. On May 18, 1949, the Legislature adopted Chapter 306 which provided for an accelerated highway construction program. Under this legislation the DPW was directed to start the program by building a Central Artery for \$37 million. The Central Artery was the first segment of the expressway which was to be the Inner Belt.

In 1957 and in 1958, i.e. after the Central Artery had been completed, some supplementary traffic data were collected by Boston College to update the 1948 projections.⁹ It was realized at this time that the projections based on the 1948 data, and therefore the 1948 Master Plan, had under-estimated the growth of automotive transportation.

XIII.A. The Inner Belt in the North End

The 1948 Master Plan established more than just the concept of a system of radial and circumferential expressways; it was fairly specific in showing the locations of routes and the interchanges. Thus, by fall, 1949, the DPW could already propose a "High Bridge" across the Charles

of public transportation and in favor of increased private car ownership.

⁸The 1930 Whittier Report, in its projection of 1965 traffic was very good because of such a cancelling effect. The area's population was over-projected by 33%, but the car ownership ratio was under-projected by 25%.

⁹Seminar Research Bureau, Travel in the Boston Region, 1959-1980; Volume III: An Evaluation of Transportation Needs, (Boston: Boston College, 1958).

River between Charlestown and the Charles Station. On October 10, 1949, a public hearing was held to discuss the proposed initial structure of the Central Artery. Only seventeen people attended the hearing, and most of these were officials representing groups or interests who traditionally have supported large capital improvement projects, such as highways.¹⁰ In a radio address in late January of 1950, Governor Dever informed the public that an elevated expressway structure, designed by Dr. John Wilbur, head of M.I.T.'s Department of Civil Engineering, was planned to run from Cambridge to Boston's Atlantic Avenue via Charlestown's City Square. The mayor of Boston strongly advocated expediting construction.¹¹

The Central Artery had originally been shown following Atlantic Avenue; by spring 1950, however, the DPW showed the Central Artery running between the North End and the Central Business District (CBD).

¹⁰The following groups had a representative at the hearing and were recorded in favor of the DPW proposed high structure:

- Greater Boston Development Committee
- Boston City Hall (Assistant Corp. Council)
- Mystic River Bridge Authority
- Maritime Association of the Boston Chamber of Commerce
- DPW consultant, (Dr. John B. Wilbur)
- New England Maritime Contractors, Chapter of the Association of General Contractors of America

The only two groups who registered opposition were:

- Boston Election Commission (Joseph A. Langone)
- Boston and Maine R.R. (C.C. Robinson)

Robinson argued that the high bridge proposal could not be evaluated by itself, that a specific plan for the whole Central Artery should be presented, that only then could the segment contained in the current proposal be evaluated. Langone opposed the proposal because, he argued, the new structure could not solve the problem of traffic congestion.

¹¹Mayor Hynes felt that "...this (the Central Artery) is what we have been waiting for for 25 years and more..."

Boston Traveler, January 30, 1950.

This new alignment was called the Maguire Plan. People living in the North End, or owning businesses in the anticipated right-of-way of the proposed Central Artery, responded to this by organizing to influence the highway location-design process.

The Committee to Save the North End (CSNE) was formed in late March; one of its chief organizers was George C. Miller who also became its first chairman. By early April they had circulated a petition and collected a great number¹² of signatures of people opposing the highway. They did not take issue with the highway per se, but with the alignment. They proposed that the highway instead follow Commercial Street and Atlantic Avenue, just as the DPW plans at one point had shown it.¹³ They argued that the more recent alignment proposed by the DPW was extremely detrimental to the community. The Committee expressed the community's apprehensions about living in the shadow of an elevated expressway. They were convinced that their residents had a sufficient dislike for an elevated road near their houses that those who could afford it, would move out. The result, they argued, would be an exodus of middle-class residents leaving only those behind who could not afford to leave. This, in turn, would lead to a general deterioration of the neighborhood. Specifically, they argued that:

- 1) The highway was aimed "through the heart of the North End".

¹²They claimed to have the signatures of 10,000 businessmen and residents of the area.

The Boston Herald, March 14, 1950.

¹³Fay, Spofford and Thorndike, an engineering consulting firm, also had recommended this alignment to the DPW.

- 2) The highway would isolate the North End from the rest of the peninsula by means of the large, imposing, elevated structure.
- 3) The highway would create great economic hardships on some individuals and on some businesses.¹⁴

CSNE held mass meetings at which these issues were discussed. When the committee felt that news reports were not giving their most central arguments adequate coverage, they purchased advertising space and presented their own case. The DPW Commission,¹⁵ the mayor of Boston, and the Boston Chamber of Commerce -- all anxious to proceed with construction -- each gave the highway opponents from the North End a hearing, but none of them were moved to change their position. The highway opponents next appealed to the state legislators to reconsider the mandate they had given the DPW to build the Central Artery, but this was to no avail.

In what may have been an effort to multiply itself, CSNE in 1951 established a number of subcommittees.¹⁶ Each subcommittee concerned itself with a particular geographic area; each one's membership was made up of the business-men and residents directly concerned with that area. By this time CSNE and the subcommittees addressed themselves not so much to the public at large as they made an effort to get their story

¹⁴The Boston Post, April 1 and 5, 1950.
The Boston Globe, April 24, 1950.

¹⁵William F. Callahan was DPW Commissioner at the time.

¹⁶The subcommittees were:

- 1) State Street Area Subcommittee (SSAS)
- 2) Haymarket Square Area Subcommittee (HSAS)
- 3) Beverly Street Area Subcommittee (BSAS)
- 4) Market District Subcommittee (MDS) and
- 5) Hanover Street Area Subcommittee (HSAS)

to each legislator. But, the State Legislature in early summer of 1950 for the second time refused to consider legislation aimed at preventing the Central Artery from going through the North End. Chairman Miller also felt that the businesses and residents were gradually giving better support to CSNE, as many of them came to realize that the Central Artery would indeed have very disruptive impacts on those who found themselves in the right-of-way. By fall, 1951, he claimed active support from 450 businessmen.

Another group that came into being and tried to have the DPW adopt an alignment which would be less detrimental to the market area was the Committee to Save Boston Business (CSBB).¹⁷ A number of meetings were held, but the group did not pursue its professed cause with much vigor.

The North End community groups stood alone against the DPW, City Hall, the Chamber of Commerce, the Port Authority,¹⁸ and the State Legislature in opposing the Maguire alignment. The groups did not, however, oppose the Central Artery per se; they only opposed the alignment. Thus they tried to persuade the powers that be to reconsider the original Commercial Street-Atlantic Avenue route. Even though this resulted in the rather simple contest of showing which of the two alternatives was the more desirable, the impacts associated with each were not well known.

¹⁷ Fredrick Langone was chairman of the CSBB; Attorney Vincent Brogna, Jr. was its legal advisor.

¹⁸ George L. Wey, chief engineer of the Port Authority, explained that the Authority opposed the Commercial Street-Atlantic Avenue route proposed by CSNE because that alternative would tend to inhibit the dock area's redevelopment and would interfere with surface traffic.

As a result each of the two sides in the contest used its own figures of the predicted impacts.¹⁹

It was not enough that each party based its evaluation on a different set of statistics, they also had such different criteria for evaluating the two alternatives' impacts that the participants in this tacit negotiation process might as well have spoken different languages. While the CSNE spoke chiefly in terms of families, businesses, and jobs displaced, M.I.T. Professor Wilbur in his role as DPW consultant, demonstrated the superiority of the Maguire route over the Commercial Street-Atlantic Avenue alignment in terms of "numbers of vehicles with a CBD destination" served.²⁰

¹⁹CSNE predicted the following impacts of the Maguire route:

- 1) businesses displaced: 900
- 2) dwellings destroyed: 100
- 3) gross business losses: \$185 million
- 4) job displacements: 20,000
- 5) land damages: \$40 million
- 6) losses in taxable property: \$7.5 million

The Commercial Street-Atlantic Avenue route, the CSNE was convinced, would be less disruptive.

The Boston Herald, which was generally on the DPW's side, in an editorial, however, used the following figures of predicted impacts:

Maguire route:

- 1) businesses displaced: 333
- 2) families displaced: 92

Commercial Street-Atlantic Avenue route:

- 1) businesses displaced: 456
- 2) families displaced: 549
- 3) mileage above Maguire plan: 2,200 feet
- 4) construction cost above Maguire plan: \$7.9 million

Boston Post, April 1, 1950.

Boston Herald, May 31, 1950.

Boston Globe, April 26, 1950.

²⁰It is worth noting that the difference of evaluation criteria between the CSNE and the DPW aside, Professor Wilbur's rationale, for preferring the alignment that comes in direct contact with the CBD is no longer shared by all traffic engineers. The Hollywood Race Track complex in

Needless to say, the community groups saw themselves at a distinct disadvantage. Not only did they not have the resources to do the necessary research to predict the highway's impacts as the DPW had them, they had to depend on the DPW for construction cost data, geometric standards, and the traffic system's predicted performance. The way the community groups behaved in their effort to overcome the inequities of available information had the effect of working into the hands of the pro-highway interests. They argued that the DPW proposal could only be discussed if all of the Central Artery's impact were known. They therefore demanded:

- 1) that they be told precisely where the DPW was planning to locate the Central Artery; i.e., they wanted a block by block account of the properties that would be taken,
- 2) that a public hearing be held after these basic design concepts were drawn up.

The DPW did not -- in fact, could not -- provide design information during the location-planning phase. Because it was, and still²¹ is, DPW policy not to release information to the public on the various alternatives that they were considering until a choice has been made, the

Los Angeles which, like the CBD, is a great traffic generator also generates most of this traffic during short, accentuated peak periods. The highway decision-makers, including the race track owners, preferred the expressways to come no closer than one to two miles to the parking area. This, they argued, permits the traffic to filter through an entire network of local streets and to use many expressway access ramps. If a high-speed facility brings the traffic right up to the destination, they reasoned, serious congestion has to result from the slightest obstruction to its flow; i.e., the system then has no slack.

²¹ Fall, 1969.

CSNE's demands only reinforced this policy.²²

In mid-July, 1950, residents and business owners in the North End were still trying to find out whether they were in the right-of-way or not while, at the same time, the DPW Commissioner announced that he would order land-takings within 30-60 days. He also made it public that he would not disclose in advance which properties this was to involve.²³

Thus, while the DPW was waiting with releasing right-of-way information until the design was well enough finalized to make it possible to list the properties which would be taken, its planning process made no provisions to negotiate the alignment after this date. Specific information was released for the purpose of notifying the community whose property was about to be taken, not for purposes of discussing possible alternatives. This is not to say that some minor changes were not negotiated. A minor realignment in the Fort Hill Square area which resulted in having the highway bypassing -- rather than going through -- the business property of one of the most vociferous highway opponents was announced in December 1950. The mayor approved of the change, and the Boston Herald editorialized that the compromise did not appear to cost the taxpayer anything and served to expedite the completion of the much

²²The Federal Highway Administration, about 20 years after CSNE requested a public hearing on the major design issues made such a hearing a mandatory procedure.

Witness, Federal Highway Administration Policies and Procedures Memorandum 20-8.

²³The Boston Herald, July 17, 1950.

needed highway.²⁴

On February 16, 1951, the DPW informed the first set of North End families and business owners that their properties were within the right-of-way by means of sending them, through the mail, notices to the effect that they had 60 days to vacate their properties. DPW Commissioner Callahan appointed state right-of-way engineer Lester J. Ellis to handle hardship cases of companies and families "who might require more than two months."²⁵

This, of course, was not the format in which the North Enders had wanted their "block by block" description of the highway alignment. Besides residences and businesses, many community institutions were affected;²⁶ the community now understood what the impacts of the highway would be, and as late as fall 1951 they were still asking for either a public hearing or a hearing before the Governor. Social workers, recognizing the Central Artery as an effective physical and social barrier, joined the CSNE in opposing the highway.

The newspapers, in their editorials, took sides with the DPW. The Boston Herald went out of its way to discredit the anti-highway groups.

²⁴The Boston Herald, December 29, 1950.

²⁵The Boston Herald, February 16, 1951.

²⁶The facilities of the following ethnic clubs were listed as being in the right-of-way:

- Italian Union Club
- De Meo Club
- Capraro Club
- Genoa Republican Club
- Grant Lodge of the Independent Order, Sons of Italy

The Boston Herald, February 16, 1951.

Without denying the North End anti-highway groups' arguments that the local community in general, and many individuals specifically, would experience great hardships, they labeled them as a "special interest group" trying to get special consideration at the cost of the general public. They suggested that the kind of complaint made by the CSNE "...can't be prevented...(since)...it is impossible to please everyone...".²⁷ They represented (or created?) the prevailing notion among its wide readership that the North End groups' complaints did not have to be answered since "...every agency...is in agreement 100% with the decision to proceed along the route set out by the DPW...This unanimity of opinion includes the City Planning Boards, the Boston Traffic Commission and several engineering firms...". It was not enough that they were willing to create "100% unanimity" simply by not counting the community-based anti-highway groups,²⁸ they went on to suggest -- by implication -- that these groups were not legitimate, that "...every civic, business, and industrial group to which a puzzled citizen or businessman would normally turn for advice and guidance...(supported the DPW)".²⁹

The newspapers were not ignorant of the Central Artery's actual impacts. Beginning in early spring 1951, they ran a sequence of nostalgic articles about the "Dear Old North End", the wonderful community it had been, and that, regretfully, it would never be the same again. A March 11, 1951 story, for example, "World Famous Area of Historic Boston to Undergo Complete Remodelling -- Many 50 Year Residents to Go", headlined

²⁷The Boston Herald, May 31, 1950.

²⁸as well as the B & M Railroad Co. and the Boston Election Commission

²⁹The Boston Herald, July 18, 1950.

a sentimental biography. A Dr. Joseph Asher was quoted: "It's going to be very lonely now. I have been among these wonderful people (i.e., the Italians) for 48 years. That's a long time. They have been very kind to me and I shall miss them very much. As yet I do not know where I am going. I would like to have an office as near these fine people as I can. I have seen three generations grow up.

"I always had the dream that one day there would be a fine big hospital built here for the Italian people. Perhaps that day will come. These people deserve it. They are the salt of the earth. It is difficult to collect your thoughts when something like this happens. To be a philosopher at a time like this is not easy..." Ironically, Dr. Asher and any other individuals who were giving their stories of the kind of hardship they were experiencing felt compelled to add, almost apologetically, that they really "were not against progress...".

The North End, particularly the area in the right-of-way, was also the scene of many push-cart based vegetable peddlers pursuing their business. Not until 1952 was any mention made by the papers of the plight of the many men who had been earning their living by selling produce from pushcarts. Because most of them were earning a bare subsistence, any disruption of their market system constituted a serious threat to them. The expressway would put most of them out of business. The Boston Daily Globe, however, had no room for compassion; it wrote on June 17, 1952: "The more than 500 men who sell produce from pushcarts and horse-drawn wagons in the North End,...are really blowing steam...they'll have to join the great exodus -- by decree of the Commonwealth -- and they're not exactly happy about it."

Governor Dever, in a similarly ironic mood, asked the State Legislature -- which had repeatedly refused to reconsider the Central Artery's alignment to lessen its impacts on the North End -- to name the Central Artery after the late ex-mayor from the North End, John Fitzgerald, because, so the Governor explained, "Honey Fitz was the North End's greatest booster".³⁰

Thus the Governor as well as the papers belatedly began speaking of the North End's proud history -- which is not to say that they were willing to recognize the legitimacy of community groups' protests. In fact, the papers' maudlin review of the community's history as a reception center for a succession of Irish, Jewish, and finally Italian immigrant groups -- combined with the refusal by all the powers that be, including the papers, to give the community more consideration than the absolute minimum required by law -- i.e., 60 days notice -- was correctly interpreted by all; it meant that the North End was written off, that affair was finished, the chapter closed.

XIII.B. The Inner Belt in the Garment District and Chinatown

Immediately south of the North End, near Faneuil Hall, lay a large old food - particularly meat - wholesale market area. Much of this had to give way to the Central Artery. The Massachusetts Market Authority in 1951 chose a large vacant tract in the South Bay area to relocate their wholesale market activity. Meat dealers who were notified in 1951 that they had to vacate their property, however, found it extremely dif-

³⁰The Boston Post, March 11, 1951.

difficult to find new locations and to make the move. As a result, demolition and construction schedules could not be met. In 1953 Governor Herter and the republican majority adopted a bill which reimbursed the general contractor for the estimated cost of skipping the Market Area segment of the highway, and beginning construction - instead - of the segment further south. Under this provision the meat dealers were permitted to extend their stay in their old facilities, now owned by the state, until September 1953.³¹ It, in effect, legalized their stay for a few months. Many dealers did not vacate their properties until mid-winter however.

During 1952 the newspapers began to mention some impacts of the Central Artery that were to be felt by a somewhat wider public than the North End Community. They predicted the Boston property owners would have to absorb the city's loss of taxable property in the highway's right-of-way by paying higher tax rates; the 1952 tax rate rise, as a result of the Central Artery, was to be 25 cents. This is not to say that the papers were becoming pessimistic about the road building program; they remained clearly pro-highway, pointing out that in the long run the city would gain for more than it was losing temporarily.³²

³¹The original bill made it possible for the meat dealers to stay on without paying rent. The democratic minority in the legislature attacked this provision with sufficient vigor that an amendment was attached to the bill requiring the dealers to make rent payments to the state - retroactive to the date of the property sale to the state. The democratic group also attacked the \$750,000 compensation paid to the contractors for skipping temporarily over the Market Area segment. Without ever explaining how it might be done, they criticized the governor for making the settlement without getting competitive bids. They labeled the arrangement "the big steal".

The Boston Globe, March 25, 26, 27 and August 23, 1953.

³²Boston Traveler, May 1952.

When the highway engineers in early 1953 turned their attention to the segment of the Central Artery through Boston's Garment District and Chinatown, they were confronted by an outburst of coordinated opposition. Like in the North End, the community did not argue against the highway per se but against the particular alignment and design proposed by the DPW. Unlike the gradual, uncoordinated, even misdirected nature of the opposition in the North End, the Chinese community responded at once, with apparently unanimous and well-directed protest.

The DPW had kept its plans for the expressway between the South Station and the South Bay areas, where it was to divide into the Inner Belt and the Southeast Expressway, secret until March 25, 1953. On that day a map of an alignment designed by the DPW was published in the Boston Post. It was then realized that about \$9 million of business valuation³³ would be lost from the city's tax rolls, that the garment and leather industries would lose much of their facilities, and that the rather small - but nevertheless this country's third largest - Chinese colony would lose many of its stores, restaurants, and dwelling units. One of the Chinese business community's symbols of prestige was a recently completed \$750,000 office building belonging to the Chinese Merchants Association; it was one of the buildings that stood in the way of the proposed highway.

The Chinese Merchants Association met on the 25th of March, appointed a special committee to confer with Governor Herter and Mayor Hynes, and made a number of announcements. They declared that the Chinese community

³³Since Boston's valuation rate was then about 1/3, the \$9 million valuation actually represented about \$27 million in market value.

was facing extinction. Wang Jayne, speaking for the Association, addressed himself to the business interest of Boston by warning that "...the magic of Chinatown would fall away almost overnight if the highway passes through Hudson Street...If we had to move our businesses, the Chinese people wouldn't stay here, they'd go to New York, Chicago, or San Francisco...and Boston would be the poorer for the loss. A lot of money goes into the public treasuries from Chinatown restaurants and stores...The Chinese colony in Boston is 80 years old. It is growing all the time. There is no other place in this area where our people could be so close together and still be as self-supporting."³⁴

Mayor Hynes announced his opposition to the alignment also on March 25. He declared the highway's devastating impact on the leather wholesale district and the predicted \$9 million loss of tax base to be unacceptable. He appealed to the governor to stop the DPW from proceeding with its plans, and he proposed an alternative alignment of his own for the segment of highway in question. Mayor Hynes' alternative was described as running along the Dorchester Avenue side of South Station and then cutting across the New Haven Railroad yards to Broadway Bridge.³⁵ He expected that this alignment would result in a tax-base loss of about \$4 million. The mayor asked the Boston Planning Board to investigate the feasibility of his alternative.³⁶

³⁴The Boston Post, March 26, 1953.

³⁵Mayor Hynes' alternative had much in common with an alignment suggested by a private citizen in 1950. The Boston Daily Globe, on April 29, 1950, carried a route proposed by Fredrick A. Robinson, a Roslindale engineer, which he estimated to cost \$24 million less than the route proposed by the 1948 report.

³⁶The Boston Globe, March 25, 1953.

The papers carried the story of the sudden flaring of opposition on their front pages. Protest was so massive and coming from enough different sources that the editors were not tempted to dismiss it or try to undermine it by suggesting that it came from "special interest groups" asking for special treatment. They used headlines such as, "Artery Threatens Leather District and Chinatown",³⁷ and "Artery to Doom \$9 million Tax Area".³⁸

The new DPW Commissioner, John Volpe, made an effort the following day, March 26, to calm the fires. He explained that four alignments were under consideration, not just one, that, in fact, the DPW had not made any choice among them. He suggested that the whole protest was due to a misunderstanding on the mayor's part, that there really was no need for the furor. The DPW, Volpe told, had forwarded all four routes to Boston's DPW Commissioner George Hyland, "so that the mayor, Mr. Hyland, and the City Planning Commission might have an opportunity to submit to the state DPW any suggestions as to the route they believed most desirable".³⁹ The press and the various interested parties, however, continued to refer to the disputed alignment as the DPW's alternative.

On the third day of the Chinatown crisis Governor Herter and Mayor Hynes agreed to meet within two weeks together with state DPW Commissioner Volpe, city DPW Commissioner Hyland, and City Planning Board Chairman Thomas F. McDonough. When on April 10 that meeting took place,

³⁷The Boston Globe, March 25, 1953.

³⁸The Boston Post, March 25, 1953.

³⁹The Boston Herald, March 26, 1953.

the DPW released maps of three alternatives. One of these led along the Fort Point Channel. The alternative of filling-in the channel had at one time been considered and rejected by the DPW; the length of time required for a filling operation -- rather than cost -- had been deemed excessive. The result of the meeting was that the state agreed not to proceed for 30 days. Mayor Hynes was, in those 30 days, to develop an alternative "which will have the functional advantages of the inner route (i.e. the one disclosed March 25) through the leather district and still not require the demolition of so much highly valued property".⁴⁰

Considering the fact that even if the city had the necessary staff and other resources to develop an alternative alignment to substantiate claims about its impacts, geometric performance and traffic capacity, it was a tall order to accomplish in one month. There is no evidence that Mayor Hynes took the bait and actually tried to do it in one month.⁴¹ The city eventually asked for a more reasonable time period to come up with its own alternative.

Not much happened until fall. Experience with the North End section of the Central Artery was demonstrating to the public that acquisition-demolition-construction and completion schedules tended not to be met. Owners had to be taken to court before they gave up their properties. Once their properties were owned by the state, they still might not leave; some of them simply could not find a place to go to. A big steel strike was forcing a lengthy stoppage of construction, and the

⁴⁰The Boston Herald, April 10, 1953.

⁴¹Having already suggested an alignment on March 25, he had, of course, already fulfilled his charge before the meeting was held.

necessary moving of railroad tracks was responsible for another delay. The predicted construction cost of the Central Artery was adjusted upward. In 1952 it had been put at \$60 million;⁴² a year later newly elected Governor Herter placed it at \$93 million.⁴³ At about the same time, the State Legislature began serious consideration of building a toll road from Boston to the New York state line in the area of Albany.⁴⁴ And so it went on.

Fall 1953 saw the most hectic controversy for the second segment of the Central Artery. A number of alternatives suddenly appeared on the scene; the alternatives were being proposed by different groups and were accompanied by various predictions, threats, and promises.

On August 13, Arthur G. Plante, assistant vice president of the New Haven Railroad, presented an alignment alternative on the railroad company's behalf. This alternative promised, according to the New Haven Railroad, to be less disruptive to the city. It consisted of the following elements:

- 1) - The artery was to tunnel under South Station
- 2) - The railroad tracks in the New Haven rail yard were to be placed underground,
- 3) - The highway was to be elevated, and
- 4) - On the ground level of the rail yard, 10,000 cars could be parked.⁴⁵

⁴²The Boston Post, April 6, 1952.

⁴³The Boston Traveler, April 13, 1953.

⁴⁴Governor Dever made the recommendation in his message to the Legislature in 1952: The Boston Globe, February 17, 1952.

⁴⁵The Boston Traveler, August 13, 1953.

In early September,⁴⁶ an engineering consulting firm from New York,⁴⁷ engaged by the state DPW in late July, presented their solution to Mayor Hynes and other municipal officials. The alternative was said to require the taking of \$8 million tax property. One of its major features was a shallow tunnel section which would not eliminate the need to remove the buildings above it but which nevertheless produced a space-savings because the surface area could be used for local streets. Because the plan still required much property taking, the city officials did not rush to embrace it.⁴⁸

Coincidental with the pre-election campaigning, the period of time between October 19th and November 4th saw a great outpouring of concern for the community on the part of public and other candidates for office. Many public figures who had not played any role in the highway decision-making hence (nor since) suddenly made the papers by taking firm stands against the alignment the DPW was believed⁴⁹ to have chosen.

Four public officials urged the Chinese community not to settle for the DPW's plan and they proposed an alternative of their own. Addressing the Chinese Consolidated Benevolent Association of New England, the Governor's Councillor Patrick J. Sonny McDonough, Representative Julius Ansel, Assistant Corporation Counsel Samuel Bonacorsse, and Assistant

⁴⁶The plans were presented to city DPW Commissioner Hyland and state DPW Commissioner around September 1, to Mayor Hynes, the Boston Planning Board, and the city's traffic experts on September 8.

⁴⁷Parsons, Brinkhoff, Hall and McDonald.

⁴⁸The Boston Post, September 10, 1953.

⁴⁹The DPW Commissioner continued to assure the public that he had made no judgment about an alignment. The Boston Globe, October 20, 1953.

Attorney General Saul Gulvitz pointed out that the community's future was at stake. They suggested that the Chinese Benevolent Association and the Chinese Merchants Association muster all available power to defeat the DPW's alignment; McDonough offered to lead a delegation to DPW Commissioner Volpe's office. He recommended a route from Atlantic Avenue through the New Haven Railroad freight yards and over Albany Street.⁵⁰

A few days later McDonough threatened that he, some Chinese merchants, and representatives of the garment industry, as well as directors of four churches, were willing to file a ten-taxpayers' suit⁵¹ to block the DPW from carrying out its plan if it became necessary. Furthermore, he and two other members of the Executive Council were prepared to stop payment toward any contract that Volpe signed if the DPW adopted a route through Chinatown.⁵²

Boston City Council unanimously adopted an order directing Corporation Counsel William L. Baxter to seek a court injunction to restrain the DPW from demolishing any buildings in Chinatown, in the leather district, and in the garment district. Councillor Piemonte, who had introduced the order, argued that the highway would cause not only financial hardships but, more significantly, that it would do irreparable damage by destroying the Chinese community and its people's life-style.⁵³

⁵⁰The Boston Post, October 29, 1953.

⁵¹The ten-taxpayers' suit, as provided for by the constitution of the Commonwealth of Massachusetts, has served as a very effective vehicle for relatively small citizen groups to confront local governments and their administrative agencies.

⁵²The Boston Post, October 23, 1953.

⁵³The Boston Post, October 20, 1953.

Mr. Baxter was, of course, not ignorant of the rather limited conviction with which the city councillors made their pronouncements; he calmly announced that the city council's "order" was really a "request" and that he did not intend to carry it out.

As Boston DPW Commissioner Hyland saw it, Volpe had three choices:

- 1) Construct the highway through Chinatown and the garment district,
- 2) construct it through the leather district, or
- 3) give the city three months to work out an alternative of its own.

He hinted that he had in mind engaging a well-known engineering consultant, John Clarkeson, because Clarkeson was of the opinion that an alignment could be worked out which would be superior to the one submitted by the DPW's New York consultant. The City Planning Board supported Hyland in his request for a three-month delay.⁵⁴

The garment industries threatened to move out of the city if they were forced to relocate. Fifteen garment industry executives met and appointed a six-man committee to search for possible new sites. Their threat of leaving Boston was made credible by the fact that Rhode Island officials as well as the town of North Adams, Massachusetts, actively tried to attract Boston's garment industries.⁵⁵ Laurence Richmond,

⁵⁴The Board claimed that the New York consulting firm's estimate of its own recommendation's construction cost was about 20% too low.
The Boston Post, October 23, 1953.

⁵⁵North Adams reportedly offered the industry \$1 million to help offset the cost of moving the operation which was grossing \$200 million annually and had a \$50 million payroll.
The Boston Post, October 23, 1953.
The Boston Herald, October 27, 1953.

executive director of the New England Apparel Industries claimed that a number of other communities had made attractive offers of free land and/or tax abatements. Spokesmen for the 12,000 member Garment Workers' Union talked of marching on the State House. The State CIO⁵⁶ Council also condemned the DPW plan and implored the governor to force a different choice on Volpe.⁵⁷

When Governor Herter arrived home on October 26 from a trip to Baltimore he found a nine-man delegation of the garment industry waiting for him. Because the governor had expected only one or two, he admitted only three of the delegates into his home for a conference, making the other six wait in the lobby. The industry representatives argued that many of their member businesses were sufficiently unstable that a forced relocation would force at least half of them out of business.⁵⁸ The Governor promised "to extend every possible consideration"

⁵⁶Council of Industrial Organizations.

⁵⁷The Boston Post, October 28, 1953.
The Boston Globe, October 28, 1953.

⁵⁸The three industry representatives admitted:

- Phillip Kramer, manager of the Joint Board of the Cloak, Shirt and Dressmakers' Union, AFL
- Ralph Cohn, manager of the trade board of the Cloak, Shirt and Dressmakers' Union, AFL, AFL International Ladies' Garment Workers' Union
- Jerome Franck, of Warshauer and Franck.

The six representatives left in the lobby were:

- David L. Rosenberg, of the Bastam Royal Petticoat Co.
- Oscar Cohen, of Century Sportswear Co.
- Harold Rosenberg, of Rosecrest Sportswear Co.
- George Mover, of George Mover Co.
- Laurence Richmond, executive director of the New England Apparel Industries, and
- Dorothy Starr, Richmond's secretary.

The Boston Post, October 27, 1953.

to the industry.

A candidate for City Council, attorney Edward J. McCormack, demanded that the DPW look for a less harmful route, saying, "...it is unthinkable that a city should be wrecked to build a highway."⁵⁹ In late October even the Associate State Commissioner of the DPW, Francis V. Materia, came out in opposition to the DPW alignment.⁶⁰

Not all parties to the city's decision-making took a firm stand against the highway. But most of those who were not against the proposed highway did not support the idea that quick construction of the highway was synonymous with progress for the city. The Boston Retail Trade Board reemphasized the need for direct access to the retail trade area from the expressway, but it also expressed the opinion that this had to be accomplished without dislocating the garment industry. The Boston Chamber of Commerce, which had hitherto always supported the DPW firmly and had generally been for expediting the Central Artery project, suggested that Volpe grant the city and the other highway opponents "a reasonable period of time" to work out the problems. The Chamber's president, Paul T. Rothwell, urged the Boston Housing Authority to redevelop the New York Street area with all haste as a possible area for expanding the garment industry into - or to relocate it there.⁶¹

Adding to the general confusion in the pre-election period surrounding the issues of "who was backing what alternative", a route proposed

⁵⁹The Boston Post, October 28, 1953.

⁶⁰The Boston Post, October 27, 1953.

⁶¹The Boston Globe, October 21, 1953.
The Boston Post, October 26, 1953.

by the State Commerce Commissioner somehow got labeled "the Herter-route" only to be vigorously disowned by Herter. Commerce Commissioner Richard Preston suggested the adoption of a route which had first been recommended in 1926. This route avoided the garment district as well as Chinatown but required cutting off a corner of South Station. Governor Herter, with whom the alignment had become identified, announced that the route did not have his endorsement, that in fact, he had never seen or discussed the alternative in question.⁶²

November 3 finally saw the DPW take a public stand for a particular alignment. Declaring that choosing an alignment was essentially an engineering decision, Governor Herter gave, at least officially, the decision-making power to the DPW.⁶³ Commissioner Volpe made public a new alignment. This route was not for negotiation, it was the official line of the planned Central Artery expansion; the only modifications that were anticipated, Volpe explained, were minor changes that might arise as the construction drawings were being completed. This meant that the city would not be granted its request of a three-month delay. Volpe announced, however, that if the city could produce a superior design before January 1, 1954,⁶⁴ the DPW would be willing to consider it.⁶⁵ Otherwise, land-

⁶²The Boston Post, October 29, 1953.

⁶³The Christian Science Monitor, November 3, 1953.

⁶⁴Volpe made no secret of the fact that he was confident that the city would not be able to do this by the given deadline.
The Boston Globe, November 3, 1953.

⁶⁵The offer by the DPW was not that if the city came up with a good design by January 1, 1954, the DPW engineers would take on the job of implementing it; it was that if the city could "dig up a better substitute plan, ... (the DPW would)...be glad to consider it". Thus the implication was made

taking would begin by early March, 1954, and demolition by early summer.

The proposal placed the highway one block east of the DPW's earlier alignment proposal. About half a mile of the highway near South Station was to run underground.

The DPW and the Governor called this latest DPW proposal a compromise alignment between the alignment desired by them and by the city. But not all parties saw it that way. The city estimated that the route would still take \$8.2 million taxable property; Chinatown, the garment and the leather districts were to be impacted by the route. Just what those impacts were to be was not clear for some time. While a garment industry representative announced that the highway would only require the taking of one garment industry plant which was being disposed of anyway,⁶⁶ others estimated the following land takings:

- 400 businesses in the garment district⁶⁷
- 25-50% of Chinatown
- 300 Chinese family dwellings
- 15% of the leather district⁶⁸

The City, represented by the city DPW Commissioner Hyland and Mayor Hynes, vigorously protested the DPW's proceeding with the Central Artery. Volpe gave in by extending the January 1 deadline for a solution from the city to February 1, thus giving the city the requested three-month delay.

that if the city came up with "a better substitute plan", i.e., a superior solution, after January 1, the DPW would not consider it.

⁶⁶The Boston Traveler, November 3, 1953.

⁶⁷The Boston Post, February 10, 1954.

⁶⁸The Boston Globe, November 3, 1953.

He also gave a somewhat better explanation of what the criteria were for having a "better substitute plan": "If, at any time prior to February 1, the city makes available a substitute plan that has the same advantages (as the DPW plan), further minimizes land damage, and meets efficiency requirements (of the DPW), we will study it and adopt it."⁶⁹

At this point the Chinese community presented an alignment alternative of its own. The plan's chief feature was that it treated the south-bound part and north-bound part of the highway as two entirely independent roads. This made it possible to accommodate one of these single-directional highways along the alignment proposed by Volpe without requiring much property taking; similarly, the other single-directional highway could be placed without much disruption.⁷⁰

During the months of November, December, and January, the engineering firm of John Clarkeson, Inc. worked on creating the city's counterproposal. Aside from the fact that one of the alternatives the city's DPW Commissioner wanted the consultant to look into was a three-level highway along Atlantic Avenue, the public did not know what kind of alternatives the consultant was working on. His work was shrouded by the same policy of secrecy that the state's engineers had always adopted. When Volpe was given the city's proposal to review, the point was made that the DPW em-

⁶⁹The Boston Herald, November 4, 1953.

⁷⁰The Chinese community's rather ingenious plan had been prepared with professional help. But there is no evidence that the plan received any serious consideration by the state, even though today, i.e., 1969, the concept of separating an urban highway into several narrow bands, which are more readily accommodated in an existing urban fabric, is considered one of the more promising techniques in urban highway design. William S. Leong, who had helped the Chinese community develop their alternative, appears to have been ahead of his time.

ployees would probably leak some of the vital information contained in the proposal; Volpe therefore had Clarkeson's proposal reviewed by a private consultant rather than by his own staff.⁷¹

While the city was busy creating an alignment alternative of its own, the community strengthened its opposition to the DPW's route some more. The Chinese Benevolent Association created a joint committee to oppose the Central Artery and elected Dr. Stanley L. F. Chin its chairman. About the same time, i.e., late November, the larger community created a new anti-highway organization. The Committee to Preserve Boston was formed; it consisted of representatives of the Chinese community, the leather, garment, and shoe industries. These two groups accused Volpe of treating the community in a high-handed fashion. They implied that his unresponsive behavior toward the community and its desires was particularly unfortunate since many of the residents were Korean-vintage GI-brides who were seeing "democracy in action" for the first time.⁷² The group talked of marching on the capitol when the new legislature convened.

On January 22, 1954, the city's proposal, developed by John Clarkeson, was made public. One of the plan's salient features was an early example of what today goes by the label of "Joint Development". The plan called for the state to construct a high-rise building in payment for razing part of South Station for the highway right-of-way. It did not require as much property-taking as the DPW's plan; somewhat symbolic

⁷¹The Boston Globe, January 22, 1954.

⁷²The Boston Post, December 1, 1953.

of this was the fact that the city's alternative did not necessitate the taking of the new Chinese Merchants Association building while the state's alternative did. The Chinese community and the garment industry immediately endorsed the city's proposal.

During the next three weeks the city and the state engaged in a remarkable negotiation process. What made it remarkable was the fact that neither side was sure of what powers it had. The state DPW was not only a party to the negotiations, it also had the formal decision-making power -- and responsibility -- to choose a final alignment. And yet, the two parties appeared to be negotiating much as if they had similar powers.

At first, on January 26, the state appeared to give in to the city by admitting that Clarkeson's route was less disruptive and saved the city millions in tax values. It contended, however, that the state DPW's alternative distributed the traffic better.⁷³ On February 10, representatives⁷⁴ of the two sides in the conflict took part in a lengthy meeting at Volpe's home which appears to have hardened both sides. The two parties questioned each other's estimates of land takings, construction costs, traffic predictions, etc. Volpe expressed impatience with the city's efforts at continued procrastination. He made it known that the DPW did not really have to get the city's consent and disclosed that the DPW engineers had, in fact, been working on construction drawings for the past

⁷³The Boston Herald, January 26, 1954.

⁷⁴Among the people present at the meeting were: State DPW Commissioner Volpe, Mayor Hynes, City DPW Commissioner Hyland, Governor Herter, the state DPW's chief engineer - Gordon Gray - and City Planning Board Chairman McDonough.

The Boston Globe, February 11, 1954.

six weeks for implementing the DPW's alternative. As a result, the press, as well as many of the DPW opponents felt that if the city was to have any impact on the route design, it could only do so by offering to make major concessions to the DPW.⁷⁵

The Greater Boston Area Council sponsored a public forum for the evening of February 11 at the Sheridan Plaza. Volpe and Hyland were to share the platform to discuss the two alternatives in question. The anti-state DPW alignment group looked forward to this confrontation since it would obviously put Volpe in the position of having to defend his alignment against a less disruptive alignment before an unsympathetic public. Volpe, however, did not intend to find himself in that difficult position. He upset his opponents' plans for the confrontation by announcing that the DPW no longer supported its own alignment and that it would present a compromise plan in short order. Hyland and his allies, as a result, no longer had an alignment to attack.

Next followed a couple of days which were again filled with rumors about the forthcoming new - and final - plan by the DPW. This plan was to constitute the DPW's compromise plan. The city, of course, was in the same position as the public;⁷⁶ its representatives did not have a direct hand in creating the plan and had to wait for Volpe to make the disclosure of his plan. The city was not the only party anxious to have the

⁷⁵The Boston Post, February 10, 1954.
The Boston Globe, February 11, 1954.

⁷⁶Mayor Hynes learned, through his representative who attended the three-hour press conference at the DPW offices on February 11, what the DPW's newest alternative was.

The Boston Globe, February 12, 1954.

veil lifted on the state's latest plan. Just before the DPW made its plan public, Representative James Burk threatened to introduce an order in the state legislature to force Volpe to appear before a special bipartisan committee "together with all plans, contracts, and...property transfer listings".⁷⁷

When on February 11, the DPW made its compromise plan public, the garment and leather industries, as well as the Chinese community, protested;⁷⁸ but the city did not.⁷⁹ The city DPW Commissioner announced that the state's alternative was probably a good solution and that John Clarkeson would add some more ramps to the city's version of the route. The chief features of the DPW's newest alternative were:⁸⁰

- 1) acquisition and construction cost: \$49.8 million
- 2) 10% of leather and garment districts, and 13% of the Chinese restaurants to be taken
- 3) 58 families of the Chinese community to be displaced (out of 290)
- 4) Part of the Fort Point Channel was to be filled in to accommodate the moved Massachusetts Avenue.
- 5) 18 ramps for the highway segment (the city's plan had only 10)
- 6) Beside the expressway, an additional North-South surface road was to be constructed
- 7) The biggest part of the Chinatown section of the Central Artery

⁷⁷The Boston Evening American, February 12, 1954.

⁷⁸The Boston Traveler, February 12, 1954.

⁷⁹The Boston Globe, February 13, 1954.

⁸⁰The Boston Globe, February 12, 1954.

was to be in a tunnel.

- 8) Several large off-street parking areas were to be created.
- 9) The highway would destroy much less of Chinatown than the State's previous alternative
- 10) The highway would tunnel under the Chinese Merchants' building to save it.

The Boston Real Estate Board made a point of endorsing the state's plan. It expressed its belief that the Central Artery would be a benefit to the city by creating more real estate values along its sides and that the garment industry would not suffer but would actually be "pulled up by its bootstraps".⁸¹ The Greater Boston Chamber of Commerce urged that no further obstructions be permitted to interfere with the process of designing and building the highway.⁸² Governor Herter gave the two parties in the controversy, i.e., the city and the state DPW, until March 15 to arrive at a final decision.

During the spring months the city and the state did come to terms by agreeing on an alignment which consisted of the DPW's compromise plan with some amendments to it. Even though some of the amendments were not to the community's advantage, the Chinese community as well as the garment and leather industries curtailed their anti-highway campaigning. At a public hearing in late May the community supported the route presented to them. Even though one of the amendments once again threatened the Chinese Merchants' Building, Shek Taat Chen speaking for the Chinese community, accepted the alignment. He ascribed this to the fact that Volpe

⁸¹The Boston Post, February 15, 1954.

⁸²The Boston Post, February 16, 1954.

had demonstrated his willingness to listen to the community by holding up the entire project for 14 months.

Looking back over the previous year of negotiating, opposing, confronting, and accusing, Dr. Stanley Chin⁸³ called the resulting decision-making process "Democracy in Action".⁸⁴

As if this remarkable degree of consensus had not been hard enough to come by, a number of State Senators, under the leadership of Senator John E. Powers of South Boston, tried to throw the question of an alignment through Chinatown open again in June of the following year. They introduced a bill prescribing the highway alignment for the Chinatown section of the Central Artery. The bill was approved 10 to 9 and sent to the Ways and Means Committee where it was promptly shelved.⁸⁵

XIII.C. The Inner Belt in Roxbury and in the Fens

In the mid-1950's, the Inner Belt made little progress. The state's funds for highways were sufficiently limited to put aside Inner Belt planning for the time being.⁸⁶ It was only with the advent of 90% federal funding for expressway construction on the interstate system after 1956, that completion of the Inner Belt was pursued again.

⁸³Chairman of the Committee to Preserve Boston.

⁸⁴The Boston Globe, May 28, 1954.
The Boston Herald, May 28, 1954.

⁸⁵The Boston Post, June 22, 1955.

⁸⁶The DPW did, however, proceed with the construction of the South-East expressway to Cape Cod.

The third segment of the Inner Belt, running from the South Bay area of Boston through part of Boston's black ghetto, Roxbury, and through part of Boston's old park system, the Fenway, to the townline of Brookline, caused relatively little controversy.

The people living in the highway's right-of-way never mounted any effective organized opposition. The only attempt that was made to protest stemmed from a group of some fifty mothers who formed the Parents of Dearborn School District in March, 1965. They protested the DPW's taking of the Aaron Davis School without providing a replacement. The city government in City Hall, under Mayor Collins, as well as the School Committee, under Chairman Eisenstadt, had already agreed to the taking of the school. The parents therefore confronted Eisenstadt -- not the DPW -- and got him, in effect, to admit that no plans existed for erecting a replacement school. This meant that the displaced students would most likely wind up in the already overcrowded Dearborn school, just as the parents had feared.

When the highway alignment was first being discussed in 1953 and 1954, it turned out that one of the major obstacles to the highway might turn out to be buildings which did not exist when the Inner Belt was planned in 1948. Some of the meat packing plants which had been evicted by the first segment of the Central Artery had built new facilities on vacant land in the right-of-way under consideration! But butchers were not the only ones who evidently did not realize what the highway plans were and thus set themselves up for a second relocation. Volpe discovered in 1953 that the Boston Traffic Commission as well as the city's Fire Department had erected some maintenance buildings right in the high-

way's corridor.

The Church of St. John of Damascus had been dislocated from its Hudson Street address by the Central Artery part of the Inner Belt in 1956. The congregation built a new church at 20 Museum Road only to find their new building threatened again by the Inner Belt in 1964.⁸⁷

The Fenway is one of the parks making up Boston's system of linked open spaces. Designed by Fredrick Law Olmsted, the park system is appreciated not only by its users but is also looked upon as one of the country's best urban green systems by landscape architects. The DPW highway designers, being just as wary of routing a road through houses as residents, had chosen a ten acre segment of the park for the alignment of the elevated Inner Belt. The Museum of Fine Arts, Simmons College, Emmanuel College, and Wheelock College are the south-side abutters to the segment of the Fens in question; private residences and some businesses are the park's neighbors on the north side.

The Wentworth Institute, Simmons College, the Syrian Orthodox Church, and -- most of all -- the Boston Museum of Fine Arts opposed the highway.⁸⁸ Museum officials argued that the peace and quiet of the Fens, surrounded by the cultural institutions, was a valuable asset of the city which could not be readily recreated once it was lost.

Architects Campbell and Aldrich, and engineer John Clarkeson created an innovative design proposal for the Inner Belt in the Fens. In Decem-

⁸⁷ The Boston Globe, December 18, 1964.
The Boston Herald, December 18, 1964.

⁸⁸ Gordon Fellman, Implications for Planning Policy of Neighborhoods' Resistance to Proposed Housing and Highways, (Waltham, Mass.: Department of Sociology, Brandeis University, 1968) p. 20.

ber, 1964, they proposed a sunken expressway with a T-shaped center section. The elevated center section was to be landscaped to provide for the continuity of the park, at least visually, across the highway. Because even this very imaginative alternative proposed to dislocate the Museum's Fine Arts School, the Museum did not endorse the proposal. Besides the loss of some of their facilities, Museum officials feared damage to some of their delicate, ancient artifacts might result from the vibration produced by heavy traffic in the Museum's immediate proximity. The museum opted for the no-highway alternative.

On March 10, 1965, The Boston Daily Globe disclosed to the public the fact that the City of Boston had already agreed to the DPW's Inner Belt alignment through Roxbury⁸⁹ and this, without any controversy.

The Museum of Fine Arts hosted an exhibit of Fredrick Law Olmsted's work in late 1964. This was one effort on the Museum's part to call attention to the threatened park. The DPW also engaged in some subtle maneuvering; they tried to get the Museum to sponsor a design competition for the beautification of the Fens part of the Inner Belt. The Fine Arts Museum, however, was not about to give the appearance of approving, by implication, of the concept of an expressway through the Fens. The Museum officials "just asked that the road go away".⁹⁰

In July 1965, Mayor Collins accepted a DPW alignment from Columbus Avenue through the Fens to the Boston-Brookline town line. This proposal

⁸⁹From the South Bay area to Columbus Avenue and Ruggles Street.

⁹⁰The Boston Globe, March 25, 1965.

called for a depressed highway,⁹¹ and, for the 3,000' length of the highway's route through the Fens, a tunnel.⁹² A year later the Museum of Fine Arts was engaging in activities which did suggest that the highway proposal had the Museum's implicit approval; W. Le Messurir, an engineering consultant, was at work designing a parking garage for the museum in the Inner Belt's air rights.⁹³

XIII.D. The Inner Belt in the Town of Brookline

Brookline is a city within a city. Essentially surrounded by Boston, Brookline is a middle- and upper-income community providing a wholesome residential environment and excellent city services.

The Inner Belt as it had been planned in 1948, was to run for a fraction of a mile through Brookline. Beyond Brookline, it had to cross through some of the City of Boston again, in the vicinity of Boston University, before it could cross the Charles River to Cambridge.

In 1960, a Brookline neighborhood association, the Cottage Farm Association, representing the owners of the rather expensive Cottage Farm area, took a public stand opposing the Inner Belt which threatened to take about twenty of the community's homes. The group did -- at this time -- not try to argue for a different alignment or a different design; they opposed the Inner Belt outright. The group communicated the opinion

⁹¹The original DPW proposal had dealt with an elevated structure for the entire Inner Belt.

⁹²The Boston Globe, July 18, 1965.

⁹³The Boston Globe, January 1967.

that the whole Inner Belt concept should be scrapped to Senator Kennedy, to Representatives McCormick and O'Neill, and to Federal Highway Administrator Rex Whitton.⁹⁴

By 1964 the DPW was giving signals that it intended to expedite Inner Belt construction in order to meet the (then) 1972 federal time limit for completing highways on the interstate system. The Brookline town government was concerned about the detrimental impact of having an elevated highway structure running through the fashionable Cottage Farm area. While the selectmen did not take a stand of firmly opposing the DPW, they did urge that a depressed alternative be considered. The DPW expressed its willingness to consider a tunnel under Beacon Street and the Charles River but pointed out that this would add \$11 to 35 million to the Inner Belt construction cost.

Cottage Farm area businessmen and residents, of course, had not softened their outspoken opposition; the predicted displacement had, in the meantime, been revised upward from 20 families to 83. Just what effect the community's general apprehension of the Inner Belt had on their residents' behavior is somewhat ambiguous. While some newspaper accounts claimed that property which was normally occupied in other years by late summer was still vacant in August 1964, other accounts claimed precisely the opposite. The residents were getting a demonstration of the effect of having an expressway being placed in the community; the Massachusetts Turnpike extension was then being undertaken, displacing 640 families in

⁹⁴Gordon Fellman, Implications for Planning Policy of Neighborhoods' Resistance to Proposed Housing and Highways, op. cit., pp. 33, 34.

the nearby Mountfont Street area.

In July 1965, Sverdrup and Parcel, consultants to the DPW, submitted two alternative highway solutions for the Inner Belt through Brookline and across to the Charles River. Both solutions used the same alignment; one proposed an elevated highway, the other a tunnel. The Brookline selectmen announced that they would use their veto to defeat the proposed elevated highway -- or any other elevated structure.⁹⁵

The Cottage Farm Association, at this juncture, introduced a different, and hitherto new, line of argument. Its members argued that because the Inner Belt rested on 20-year old plans, the entire Boston Metropolitan transportation problem had to be reconsidered. They advocated the construction of mass transit facilities in lieu of the planned Inner Belt.

Boston University, which realized that it was bound to lose some facilities to the highway was chiefly concerned with what facilities it would have to give up. The African Studies Center has been one of the school's most prestigious facilities. The Sociology Department's Anthropology section has what probably is this country's best specialists on Africa. The rare books, archeological and anthropological artifacts, as well as the Center's offices are housed in a handsome large former residence. Because the Inner Belt could, depending on its precise alignment, threaten this structure, the university wanted to protect it somehow. This it accomplished by purchasing a piece of real estate⁹⁶ next to the Center. In case the highway should swing dangerously close to the African

⁹⁵The Chronicle Citizen (Brookline), July 29, 1964.

⁹⁶The Brewer property, at 132 Carlton Street.

Studies Center the University, rather than someone else, at least owned the property which the DPW would have to purchase. While this would not guarantee the university that it could prevail over the DPW, it would be in a better bargaining position.

Boston University officials were, of course, concerned with the Inner Belt's possible impact on more than just the African Studies Center. University President Harold Case and his administrative aide, Kurt Herzfeld, communicated directly with the federal BPR in Washington to explore avenues which would permit Boston University to affect the highway route.⁹⁷

XIII.E. The Inner Belt in Charlestown and Somerville

Arriving at an accepted alignment for the Inner Belt through Charlestown and Somerville did not involve serious controversy.

While, originally, construction of this segment of the Inner Belt was to be begun in the late 1950's, nothing happened until a good ten years later. Alignment decisions had to be delayed until 1965. This delay did not result from community opposition but from a struggle within the highway administrating and building community. Mr. Callahan, the very capable and effective head of the Massachusetts Turnpike Authority, successfully blocked progress on those portions of the Inner Belt that had the potential to compete with - and, thereby, threaten - the completion of the Turnpike Extension into the core of Boston. The struggle referred to here thus dealt with the decision-making process for deter-

⁹⁷The Chronicle Citizen, July 29, 1965.

mining which of various transportation systems was to be built -- rather than with the question of alignment.⁹⁸

Charlestown is not a municipality but is part of the city of Boston. Because the highway was to run largely over 1) land which had become vacant recently when the state prison was moved out, and 2) over the B & M railroad yard, there were to be no relocation problems. The only loss the city anticipated was about one fourth of the seven and a half acre former prison site, The Boston Redevelopment Authority (BRA) had, as one of its projects, prepared plans for major changes in Charlestown. Mayor Collins had no difficulty in getting the DPW to make some changes in the planned Inner Belt alignment to accommodate the BRA's plans for the Eastern Regional Community College as well as other redevelopment projects.

Somerville's neighbor to the south, Cambridge, tried hard to make Somerville an ally in Cambridge's struggle to prevent the highway from coming through at all. As a result, Mayor Bretta of Somerville oscillated for a time between opposing the Inner Belt and accepting the DPW's route.

While the Inner Belt was to dislocate some residents in Somerville, much of it was to run through a very large under-used railroad yard. Somerville in 1965 recognized the opportunity to create a 57 acre industrial park on the land of the railroad yard. Such a development could,

⁹⁸For a discussion of the transportation system decision-making in Boston and of Mr. Callahan's role in it, the reader is referred to the unpublished Ph.D. dissertation of Frank Colcord: The Politics of Metropolitan Transportation, M.I.T., September, 1964.

it was felt, make a real contribution to help overcome the city's financial problems; it meant adding to the tax rolls without adding to the city's largest budget item: the school load. The success of the concept depended on two things, however.

- 1.) Suitable industries had to be found who wanted to locate in Somerville.
- 2.) The industrial park had to be accessible for goods and employees.

Thus, the typical view shared by most communities, i.e., that early completion of the Inner Belt spelled disaster, was not shared by Somerville beyond 1965; early completion of the Inner Belt became desirable. Mayor Bretta's failure to support Brookline and particularly, Cambridge, in their fight was looked upon as something akin to desertion by the remaining Inner Belt opponents.

In March 1965, Mayor Bretta extended an invitation to industries who were being displaced by the construction of a large NASA complex in Cambridge, asking them to relocate in the planned Somerville industrial park. He did not mention Cambridge industries anticipating being displaced by the Inner Belt; that would have been considered outright treason by his colleagues across the city line. The highway opponents in Cambridge nevertheless felt that Bretta's invitation to dislocated industries was addressed as much to industries located in the anticipated Inner Belt's right-of-way in Cambridge as it was addressed to the NASA victims; to them it smacked of treason.

The DPW, for its part, did not fail to take advantage of the rather rare opportunity to have a local government support the highway. Mayor

Bretta agreed to announce his prediction of the Inner Belt's indirect, desirable effects on Somerville's tax rates at a news conference with Governor Volpe, DPW Commissioner Sargent, and the BPR Regional Director, Hansen.⁹⁹

⁹⁹He predicted that the industrial park, in B & M Railroad yards, made feasible by the Inner Belt, would create \$20-40 million taxable property. This, he estimated, should have the result of lowering Somerville's property tax rate by \$10 per \$1000 of assessed value.
The Boston Traveler, March 10, 1965.

XIII.F. The Inner Belt in Cambridge

The Master Highway Plan of 1948 showed the Inner Belt crossing the Charles River near Boston University and proceeding from there across Cambridge into Somerville. Sometime during 1957 the DPW published a Report on Traffic Studies for the Boston Metropolitan Area. The report supported the 1948 Master Highway Plan [without any major changes] - even though it found that the traffic volumes predicted for 1970 were already being exceeded; it recommended the extension of the Massachusetts Turnpike to South Station, i.e. downtown, and it ignored mass transit altogether. The report was given only limited distribution.¹⁰⁰

In 1951 the Cambridge Planning Board issued a document¹⁰¹ exploring four possible alternative alignments.

- 1) Alternative A consisted essentially of the alignment shown on the 1948 Master Plan.
- 2) Alternative A-1 had the highway crossing the Charles River near Western Ave.¹⁰²
- 3) Alternative B crossed the river somewhat west of the Boston University bridge, followed Brookline Street to Lafayette Square and from there continued on in the same general direction to Somerville.
- 4) Alternative C followed the Grand Junction Railroad right-of-way.

¹⁰⁰Planning Services Group, The Boston Regional Survey...Highways, op. cit. p.28.

¹⁰¹Cambridge Planning Board, Planning for the Belt Route, 1951.

¹⁰²This was the alignment which the DPW pursued in the late 1950s.

In preparing the report, the Planning Board addressed itself to finding the -- from its perspective -- most desirable of the feasible alternatives. Alternative B, i.e. the Brookline Street alignment, was felt to be better than any of the others. Since the DPW had not yet made any public statements about alignment preferences that they may have had for the Cambridge section of the Inner Belt, the Planning Board chose to take the initiative and suggested that the highway be built along a Brookline Street alignment.

A few years later, with the Inner Belt alignment through Cambridge still a completely open issue, because the DPW had still made no statements about its preferences or intention on the subject, the Cambridge Planning Board felt that a more thorough study than their first paper was in order. The City Council appropriated \$9,000 for the purpose. The Cambridge Citizens Advisory Committee (CCAC) encouraged the undertaking which was aimed at using the construction of the highway to accomplish, or at least make feasible the accomplishment of, some of the Planning Board's general goals for the city. In reviewing its goals, the Planning Board felt that choosing an appropriate highway alignment could achieve the following two objectives for them:¹⁰³

- 1) The highway could serve as a barrier between the relatively

¹⁰³ Study of the Belt Expressway Through Cambridge for the City of Cambridge Planning Board, by Bruce Campbell Associates, Traffic Engineering Consultants, with Planning and Renewal Associates, Planning Consultants.

(Cambridge: Cambridge Planning Board, November 1957)

incompatible land uses of residential living and industrial activity.¹⁰⁴

- 2) The highway could enhance the development in areas of the city which were undergoing change, or were expected to be undergoing change; i.e. the highway could serve to make higher economic land uses feasible in areas of transition than would otherwise occur.

The study was carried out by a team of consultants, and a final report was published¹⁰⁵ November 1, 1957. The study looked at a number of possible alignments and established a ranking for three of these. The consultants were aware of a great number of impacts that the highway would have on the urban fabric.¹⁰⁶ Either the number of the perceived impacts

¹⁰⁴A 1962 amendment to the Federal Highway Act established the application of land-use criteria, such as these in all Federal aid highway projects by 1966. Anyone but a cynic must find it ironic that this kind of policy came along precisely when the main thrust of city planning thought was turning away from land-use planning and was directing its attention toward poverty, civil rights, education, health, and other non-physical areas of concern.

See for example 1962 guidelines by the Bureau of Public Roads, based on the 1962 Federal Highway Act.

¹⁰⁵Because the report was stamped "Not for Public Release", "published" might be an overstatement.

¹⁰⁶A careful reading of the consultants' report brings out the following list of criteria as having been the explicit basis for arriving at the rankings:

- They spoke of specific business properties when considering land takings (e.g. Stop and Shop, Robert Hall, B & B Chemical Plant)
- Referring to commercial and industrial property,
 - the hardship to the owner, and
 - the tax loss to the city
 were considered.
- Residential areas were referred to as "better areas" vs. "older houses in an area planned for redevelopment".
- There were references to difficulties of placing access ramps.

- and, therefore, evaluation criteria - was too great to permit a systematic analysis of the predicted effects of each alternative, or the explicit listing of the evaluation criteria took place only after the evaluation. This is born out by the fact that the consultants did not see it necessary to deal with some outright contradictions¹⁰⁷ in the

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- Whether the highway crosses over or under Massachusetts Avenue had aesthetic implications.
- The distribution of the traffic was seen as a function of the distribution of on and off ramps.
- The highway was seen as a potential barrier to demarcate different land-uses.
- The alternatives' different construction costs were compared; the costs were broken down into three major parts:
 - 1) the river crossing
 - 2) the highway through the city, including the crossing of Massachusetts Avenue
 - 3) the interchange between the Inner Belt and Route 2 in Somerville, i.e. the Cambridge segment's northern terminus.
- Total taxable property lost to the city was one consideration.
- The number of families to be displaced was one consideration.
- The differential impact of having the interchange of the Cambridge segment's southern terminus in Cambridge or having it on the Boston side of the river was looked at.
- The lengths of the various alternatives were compared, - this, however, without spelling out, in miles, how long each alignment would be.
- The effect of depressed vs. elevated construction on the accessibility of nearby property was referred to.
- The distances for which truck traffic would have to use local streets in order to get to the expressway were compared for the various alternatives.
- The Inner Belt's impact on local traffic congestion was another of the considerations.
- In reference to one of the alignments, alternative B, along Brookline Street, the following comments were made:
 - 1) Within alternative B, the consultants preferred an Inner Belt alignment along the west side of Brookline Street over one along the east side of the street. The only "better homes" that the area has, are on the east side of the street; an alignment along the west side thus would avoid their destruction.
 - 2) The alignment (alt. B) and the location of ramps and service roads were governed, in part, by an effort to avoid "substantial buildings" and take "low grade pro-

criteria.

Dislocation of families, which was to become the major issue somewhat later in the Cambridge - Inner Belt controversy, was not a leading concern. For instance, the fact that one of the alignments studied, the Portland - Albany route, would displace only a small fraction of the number of people the other routes would displace could be found in the report, but this fact was given less than one whole sentence. Also, the realization that the Portland - Albany route was relatively non-disruptive for residents did not qualify that alignment to be seriously considered.

An alternative labeled "A-B-alt." was recommended as the first choice. This alignment had the highway crossing the Charles River near the River Street Bridge. The road then followed River Street toward the city's

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perties".

¹⁰⁷ For example, in evaluating alternative B, the report stated that an alignment placing the Inner Belt on the west side of Brookline Street was preferable over one placing it on the east side of the street because the area had only a few "better homes" and these were located along the east side of Brookline Street. Placing the expressway west of Brookline Street thus made it possible to save these good quality residences. The fact that the report also advocated using the Inner Belt to contain expanding industrial uses to the east side of Brookline Street, however, is in outright conflict with the argument made for locating the highway west of Brookline Street. The high quality houses would, by such an alignment, be spared destruction by the highway on the one hand, but, on the other hand they would find themselves trapped on the wrong side of a land-use barrier. They would thus at best be saved momentarily; their increasing non-residential environment and isolation from the residential activities, combined with the economic pressures for converting the property to non-residential uses, would defeat what was stated as being the reason for preferring an alignment west of Brookline to one east of Brookline Street.

center; turning near Franklin Street and continuing in a more easterly direction to avoid Central Square, it angled across the city heading for a rendezvous with the Somerville segment of the Inner Belt and Route 2 near Portland Avenue and Cambridge Street. The second choice consisted of an alignment crossing the river near Boston University, following Brookline Street and then heading in a more easterly direction toward the same rendezvous point. The third choice consisted of a freely sweeping arc from the River Street Bridge to the Cambridge Street - Portland Avenue area, crossing Massachusetts Avenue just east of Brookline Street.

The Planning Board and the consultants were, at that time, referring to the triangle of land between the Charles River, River Street, and Western Avenue as the Golden Triangle. They saw great potential in the area for becoming a complex of professional offices and space for prestige businesses. The immediate proximity of an expressway, they felt, would make implementation of the concept feasible.¹⁰⁸

The Planning Board delivered the consultants' report to Cambridge City Council. But, because Mayor McNamara and most of the councilors saw the Inner Belt as a very disruptive instrument along any alignment through the city, - including the Planning Board's originally suggested Brookline Street alignment as well as the new River Street alignment proposed by Campbell Associates, - they forwarded the report to the state

¹⁰⁸Note again the same intuitive rationale equating closeness to an expressway with access to it which was present in the alignment considerations for the Inner Belt's first segment, the Central Artery. This rationale had no currency in accessibility considerations in Los Angeles.

DPW without comment.¹⁰⁹ The mayor felt that Cambridge could not spare the land needed by the Inner Belt, and he said he deplored the inevitable hardships that dislocation of families would bring down on some people. He wanted alternative routes developed which would take either no land from Cambridge or only very little.¹¹⁰

January 19, 1958, the Boston Daily Globe headlined the state's readiness to commence with the planning, designing, and construction of the Inner Belt. The public was told that the work had been held up because the Massachusetts Turnpike Authority first had to determine the alignment of the Turnpike Extension from Riverside to downtown Boston. With that matter settled, however, they predicted a fast construction schedule for the Inner Belt, with the Charlestown portion being advertised for bids by May 1958.¹¹¹

Just a few days later the Cambridge Planning Board made headlines of its own. The Globe¹¹² carried a story to the effect that "... (the) Planning Board (had) decided the route it prefer(red) for the immense Inner Belt highway through the city - one that (would) require the taking of approximately 250 homes and displacing 750 families...". Salient features¹¹³ of the alignment chosen by the Planning Board were disclosed,

¹⁰⁹CCAC Newsletter, September 26, 1962.

¹¹⁰Morey, James L., A Critique of Transportation Planning in the Boston Area, (Cambridge: Urban Planning Aid, 1966), p. 13.

¹¹¹Even though there was no controversy involving that segment of the Inner Belt, the first signs of road building were visible in fall of 1969.

¹¹²The Boston Globe, January 24, 1958.

¹¹³Features besides the 750 families to be displaced and the 250 homes to

but the actual alignment was a secret; Planning Board members were to "unveil" the actual alignment at a Chamber of Commerce luncheon within the week. The Planning Board had made its choice in light of its consultant's report and its own discussions with the state DPW.

The Planning Board's attempt to set the Inner Belt alignment in early 1958 was the last time that this body played an active role in the Inner Belt controversy. Its rather positive approach and readiness to accept the fact that an expressway should be built through Cambridge became an embarrassment to the mayor and the city council.¹¹⁴

DPW Commissioner Ricciardi made the agency's choice of a route through the Roxbury section known in March, 1961. At that time he was questioned about the DPW's preference for a possible route through Cambridge, but Ricciardi refused to discuss Cambridge at that time. Meantime State Representative Toomey from Cambridge was making it known that he was working against the Inner Belt coming through Cambridge at all; he said that the need for the expressway had never been established.

On May 10, 1960, the DPW held a public hearing on the Cambridge and Somerville segments of the Inner Belt. The DPW engineers presented the alignment that they preferred most, the River Street route, as well as two other alignments that they considered to be feasible but inferior

be taken were: \$25 million cost of Cambridge segment, the homes to be taken were largely in the Cambridgeport, Central Square, and lower Inman Square areas; the alignment would connect the Boston University span to the Somerville Inner Belt rendezvous point via Central Square, and the Inner Belt would be eight lanes wide - carrying up to 90,000 vehicles per day.

¹¹⁴All of the political actors have since then turned completely against the construction of any expressway through Cambridge. They make a point of ignoring the Planning Board's position voiced in 1957-1958.

alternatives, a Lee Street route and an Elm Street route. The River Street alignment was believed to displace about 1500 families.¹¹⁵

An estimated 2500 people attended the hearing. Clergymen, Cambridge city officials, and some state representatives decried the predicted impact of the proposed highway on the residents' and on the city's tax base. While some suggested that a Memorial Drive¹¹⁶ alignment be studied, others questioned the need for the Inner Belt altogether.¹¹⁷

A Memorial Drive alignment proposed by Representative Toomey and others could not be given serious consideration, said the DPW, because it failed to bring the traffic directly into the center of Cambridge - and its major industrial and commercial traffic generators. Also, a river-front route offered access from only one side, thereby requiring more expensive over-or underpasses than a highway with land on both sides of it. Besides these considerations, there was some speculation about what M.I.T. would do, should the DPW ever consider the route very seriously for the Inner Belt. It was generally felt that M.I.T. could - and would - prevent the choice of a Memorial Drive alignment by bringing all its in-

¹¹⁵ Colcord, Frank C., The Politics of Metropolitan Transportation, unpublished Ph.D. Dissertation, M.I.T., September 1964, p. 163.

¹¹⁶ Memorial Drive is a street along the Cambridge side of the Charles River. While it was originally designed as a parkway rather than for the very heavy commuter traffic volumes it is carrying now, it still is a pleasant road to drive. It affords the driver a splendid view of the Boston skyline. A narrow strip of park land between the road and the water carries one of our city's greatest rareties: a bicycle path. On a warm day this narrow strip of green affords hundreds of pedestrians the opportunity to walk, sit, romp, and generally enjoy themselves along the river bank.

¹¹⁷ CCAC Newsletter, September 26, 1962.

fluence to bear.¹¹⁸ Cambridge and Somerville city officials early in 1961 suggested the DPW consider an Inner Belt alignment over a railroad track area because such a route would obviously cause relatively little residential disruption. The right-of-way in question ran along various warehouses, industrial operations, and M.I.T. buildings; and the tracks were under-used, some of them even abandoned. The concept was rejected by the DPW on the grounds that the need to take railroad property, the necessity of having to build above the railroad tracks in some places, and the difficulties of dislocating businesses, added up to a prohibitively high cost. Their a priori perception was that the suggested alternative was not sufficiently feasible to merit a study.

With 1961 came a new attitude among some of the local actors; for the first time there was serious talk among these people that the Inner Belt should be opposed on any alignment. State Representative John Toomey and former Cambridge Mayor McNamara¹¹⁹ began a drive, circulating an anti-Inner Belt petition. The petition was to serve notice on the governor, the state and federal legislators, as well as the BPR in Washington, that a great number of people in Cambridge objected to the Inner Belt. Mayor Crane, for his part, promised to do all in his powers to stop the road -

¹¹⁸M.I.T.'s dormitories, classrooms, and administrative buildings occupy a long slice of land, with only Memorial Drive and the green strip between it and the Charles River. This gives the people living and working at the university the same fine view of the river and of the Boston skyline that people using Memorial Drive enjoy; it also provides a very handsome setting for the university, as it is viewed by an observer looking from Boston.

¹¹⁹He had in the meantime been replaced by a new mayor, Edward Crane.

even if he had to carry the fight to President Kennedy. In spite of the apparent unanimity of local political actors, the only federal office holder who took a firm stand against the construction of the highway was Representative Thomas O'Neill, Jr. whose district includes all of Cambridge, Somerville, and Brookline, as well as some parts of Boston.¹²⁰

Throughout this period, a struggle was going on between forces who wanted to make the state DPW more responsive to the elected government and those who wanted to keep it as it was. Not unlike highway departments in other states, the DPW had become virtually autonomous and did, for all practical purposes, not have to respond even to the governor. A DPW reorganization bill offered by Governor Volpe was defeated in early May of 1961.¹²¹ Later that month, however, when Governor Volpe's \$90 million highway bill was being rushed through the legislature during the closing hours of the legislative session, opponents of the Inner Belt scored a victory which afforded them a breathing spell. They attached an amendment to the legislation which gave nine Greater Boston municipalities the veto power over the construction of highways by the DPW within their respective jurisdictions. All of the communities through which the Inner Belt was planned to run were on the list of municipalities with the new powers.¹²²

¹²⁰Fellman, Gordon, Implications for Planning Policy..., op.cit., pp.21,22.

¹²¹Not until 1963 did a reorganization of the DPW occur; the then governor, Peabody, succeeded in dislodging DPW Commissioner Ricciardi.

¹²²The amendment was worded not to interfere with the construction of the Massachusetts Turnpike into the city of Boston which was then in progress. Colcord in his study quotes the key words from Section 4, Chapter 590 of the Acts of 1961.

In the House, Representative Toomey of Cambridge led the fight for the veto amendment; in the Senate the work was done by Senators McCann, of Cambridge, and McKenna of Somerville. McCann said that the Belt would make Cambridge "just one big traffic circle designed to help suburbanites get to and from their low-cost automobile insurance districts a few minutes faster".¹²³ Governor Volpe signed his \$90 million highway construction bill, now encumbered by the unsolicited veto amendment, "reluctantly". While he considered the amendment a "serious stumbling block",¹²⁴ he felt it more important to get the construction funds approved than to reject the entire highway bill, as he was confident that he could get the municipal veto removed at a later time.¹²⁵

It was felt that once the veto power was in the hands of municipal officials, their own political interests would compel them to use it. This was the design of the architects of the amendment, and the experience in Cambridge has borne their analysis out as having been correct.

The Cambridge City Council used its newly gained veto power already on June 6, 1961, and prevented the DPW from proceeding with the Inner Belt through Cambridge at least for the time being.¹²⁶ Toomey later wrote to DPW Commissioner Ricciardi, that he actually felt that the

¹²³Fellman, op. cit., p. 24.

¹²⁴Colcord, op. cit.

¹²⁵As it turned out, the veto was not all that easy to get rid of. Not until 1963 did Volpe's successor, Governor Peabody, manage to get the legislature to rescind it.

¹²⁶The vote was as follows:
 - five councilors voted to use the veto;
 - three voted against the veto, i.e. for the Inner Belt;

Inner Belt was needed and that he would not oppose its construction if he could be convinced that the people living in its right-of-way would not suffer hardships as a result. He felt the veto power was necessary at this time if the communities were to protect themselves from the DPW's "arbitrary use of power".¹²⁷

In 1958 the Boston College Seminar Research Bureau¹²⁸ published a study: *Travel in the Boston Region 1959-80*. This was the most thorough transportation study undertaken for the Boston Metropolitan area to date. While it did not involve a large field-data gathering effort,¹²⁹ it went beyond earlier studies in that it included mass transit and in that it looked beyond Boston's existing belt-way, Route 128. Like the DPW study of the preceding year, it supported the 1948 Master Highway Plan. More important, it gave the early construction of the Inner Belt top priority.¹³⁰

It is actually somewhat difficult to understand why the study would support the Master Highway Plan and recommend the completion of the Inner

- one councilor argued that the veto amendment wasn't law until a 90-day waiting period had elapsed; he abstained.
Fellman, op. cit.

¹²⁷ Colcord, op. cit.

¹²⁸ Colcord points out that the Boston College Seminar was one of the more important participants in the Metropolitan Transportation decision-making process.

¹²⁹ The study relied on a gravity model for the generation of trip statistics.

¹³⁰ One of the study's recommendations appears to have been a first: it recommended the construction of an Intermediate Belt, i.e. an additional circumferential highway somewhere between Route 128 and the Inner Belt. The Boston College Seminar did not suggest an alignment for this new highway, but said only that it should be at an approximate five mile radius from the center of Boston.

Planning Services Group, op. cit.

Belt without any major changes to the rest of the system of radials and belts because the study also predicted¹³¹ that the portions of all radials just beyond the Inner Belt would be loaded to full capacity immediately upon construction of the Inner Belt.¹³²

In early 1962 the DPW and the Massachusetts Turnpike Authority held a number of meetings to determine where the Turnpike-Inner Belt interchange should fall. The Turnpike Authority had made previous arrangements with the New York Central Railroad Company for the joint use of the railroad yards in Allston which made it impossible to have the Inner Belt cross the Charles River in the vicinity of River Street, the crossing preferred by the DPW.¹³³ Two of three Inner Belt routes through Cambridge presented by the DPW at the May 1961 public hearing¹³⁴ were thus eliminated by the - obviously - very powerful Turnpike Authority, which was personified by Mr. Callahan.¹³⁵

When in early 1962 a bill was introduced in the Massachusetts Senate¹³⁶

¹³¹Page 54

¹³²James Morey, op.cit. p.13

¹³³CCAC Newsletter, September 26, 1962

¹³⁴The River Street route and the Lee Street route were ruled out, leaving only the Elm Street route.

¹³⁵It is to be remembered that Mr. Callahan, working on getting the Turnpike extended to downtown Boston, saw the Inner Belt not so much as a highway to connect his own toll-road to but rather as a possible competition for the toll-road traffic. He had, since the mid 1950s, led a quiet but effective campaign against the Inner Belt.

¹³⁶Anti-veto legislation was introduced by Republican Senator Graham from Hamilton.

to eliminate the municipalities' veto power in DPW highway construction, Cambridge rallied to an anti-highway stance. City officials denounced the proposed bill; several hundred people from Cambridge and Somerville attended state hearings, and one Cambridge priest, through whose parish the Inner Belt was expected to pass, condemned the anti-veto bill in church bulletins and in statements from the pulpit. The bill was defeated in April and again in July;¹³⁷ the veto thus remained for the time being. The DPW, however, did not appear to respond to the reality of the veto and the strong local opposition. Though its mandate to implement the 1948 Master Highway Plan was now obviously challenged, it announced June 15 that it anticipated completing the Cambridge and Somerville sections of the Inner Belt in 1966-68.¹³⁸

Another changed circumstance was ignored by the DPW when it failed to respond to an amendment to the Federal Interstate and Defense Highway Act which was adopted about this time. This new legislation tried to permit highway planning and non-highway planning to be coordinated more meaningfully. 1 - 1 1/2% BPR planning funds (highway planning funds) could, under this amendment, be merged with 701 Planning funds (community planning funds), and might have encouraged a concerted attack on those highway impacts which were admittedly detrimental to the ambient area.

By August 1962 consultants to the DPW had completed the most extensive - and expensive - study of the Inner Belt and its projected traffic yet.

¹³⁷The Senate vote in April was 22 to 12; the House vote was 124 to 99. In July the House again defeated the bill 132 to 80. Fellman, op.cit., p.23.

¹³⁸CCAC Newsletter, September 6, 1962.

A mathematical model, based on the logic that every trip originating from a particular zone returned to that same zone within twenty-four hours, was used as the basis for the study. The design of the model was purposely simple. The study's authors found that traffic simulation models, which could take more than one mode of travel and/or more than one kind of trip purpose into consideration, demanded more complexity than was within the scope of their \$300,000. study. The study included an 18,000 word socio-economic analysis of the effects the construction of the remaining parts of Boston's expressway system would have. The analysts appeared convinced of the effects the construction of the remaining parts of Boston's expressway system would have. The analysts appeared convinced of the general up-beat effect of highway construction; not only did they predict the highways' positive effect on industry, trade, real-estate, and public services, they also predicted that the construction of highways would have beneficial effects on local governments and that it "will broaden the scope of the numerous cultural, educational, religious and recreational activities presently located withing the Study Area."¹³⁹

Statements about the fact that the highway would inflict great hardships on thousands of people were completely missing in the report. The only references to the possibility that dislocated residents "may experience some hardship"¹⁴⁰ referred to the fact that, unless they were located in an urban renewal area, they would have to bear thier own moving costs.

¹³⁹Hayden, Harding and Buchanan, Inc., & Charles A. Maguire Associates, Inner Belt and Expressway System, (Boston: Massachusetts Department of Public Works, 1962) Part 4, p.11.

¹⁴⁰Hayden, Harding, et al, op.cit., part 4, p.13.

The study predicted¹⁴¹ that Cambridge, with its (then) current population of 107,700 and employment of 64,000, would experience a population increase of 6,300 and an employment increase of 23,600 if the expressway system was not built - and a population increase of 8,300 and an employment increase of 51,000 (!) if the expressway system was built.

The study concluded by recommending a \$325 million ten-year highway construction program for the state. Insofar as the Inner Belt alignment went, the study reached a conclusion not unlike that reached by the DPW at the May 10, 1960 public hearing namely, that

- 1) a Brookline-Elm Street alignment in Cambridge, displacing 2,500 jobs and 1,400 blue collar class families¹⁴², was the most viable alternative,
- 2) that a route along the existing, but little-used, Portland-Albany railroad alignment which separates M.I.T.'s classroom buildings from the rest of Cambridge as well as from some of M.I.T.'s research laboratories was a less attractive alternative, and
- 3) that an alignment along the Charles River (i.e. the Memorial Drive route) was unacceptable.

The DPW's publication of the study, and its reaffirmed choice of the Brookline-Elm alignment, resulted in strong criticism on the community's part; most of this criticism, however, was aimed at the two large universities in Cambridge: Harvard and M.I.T., rather than at the DPW. The two educational institutions, especially M.I.T., were charged with caring more about their own expansion plans than about the plight of the working-class community that surrounded them. Representative Toomey accused M.I.T. of having exerted its power to keep the highway away from its own facilities,

¹⁴¹Hayden, Harding, et al, op.cit., part, 4, p.23

¹⁴²Fellman, op.cit., p.23

i.e. the Portland Albany railroad alignment, and having thus pushed the highway through the densely populated neighborhoods along the Brookline-Elm alignment.¹⁴³

Urban Planning Aid, in its much later analysis of the study¹⁴⁴, argued that, despite the study's attempt to use socio-economic data to forecast some physical changes, socio-economic impacts of the recommended highway construction program were not adequately considered.

While the alignment spared the churches per se, it threatened to disperse - and thus deplete - the memberships of two of them by displacing the residents in the St. Mary of the Annunciation and the Blessed Sacrament parishes. The pastors of these two churches became rather strong anti-highway leaders and spoke out vigorously against the proposed alignment.

The Cambridge CAC interpreted the study's recommendations for construction of those highways which the community's veto powers could not affect to constitute a "pincer movement" strategy against the city. They argued that, if Route 93, Route 2, the North-East Expressway, the South-West and the South-East Expressways, as well as the Mass Turnpike were

¹⁴³Toomey claimed that M.I.T. President Julius Stratton had told Toomey and Harvard President Pusey that M.I.T. would not stand for an Inner Belt alignment along the railroad line because there were M.I.T. facilities on both sides of it, and that M.I.T. had the power to prevent such a choice.

Fellman, Op.Cit., pp. 22,23.

Subsequent events suggest that M.I.T. indeed did have strong feelings on the subject.

The community perceived Harvard's attitude toward Cambridge to be rather haughty. One story which has been circulating for years has it that Harvard policymakers were guided in their dealings with the city, which has a large working-class population, by the motto that "Harvard was here before Cambridge came into existence, and Harvard will be here after Cambridge has ceased to exist."

¹⁴⁴James Morey, op.cit.

constructed, the question of whether to build an expressway in Cambridge, or where to build it, would soon be a moot one. With the traffic of several of these expressways trying to find its way through Cambridge's street network, Cambridge would have to capitulate eventually and would be forced to accept a limited-access highway.¹⁴⁵

Some very serious failings of the study, from a strictly technical point of view, were not brought to light for some time. In spite of its rather ambitious rigor, much like its predecessors, the study apparently had not dealt with the fact that sections of the Inner Belt, as well as sections of the various proposed radials, would become loaded with traffic beyond their capacities the moment they opened.¹⁴⁶ Considerations of the planned expressway system's dependence on - as well as effects on - the metropolitan area's mass transit system were beyond the scope of the study.

The fact that these shortcomings became known had no apparent effect on the DPW's subsequent highway plans.

According to the DPW, there had been close liaison between their highway planning effort and the municipality's related urban planning. The report stated that "continuous liaison was maintained with officials and representatives of interested business and civic groups. Briefings on the alternative Inner Belt locations were conducted in order to effect

¹⁴⁶The Massachusetts Transportation Commission Report of 1963 pointed this out in its review of the 1962 study. The Seminar Research Bureau of Boston College, one of the area's earliest and most earnest instances of academic institutions' efforts to become involved in problems of urban affairs, made a similar prediction as a result of analyzing the Master Highway Plan in 1958, i.e. early enough that the 1962 study could have addressed the problem.

¹⁴⁵CCAC Newsletter, August 2, 1962.

coordination between urban renewal programs and plans for the expressway system."¹⁴⁷ This was not, however, how Cambridge saw it. Cambridge officials claimed that there had been no such liaison; they argued that they had found it practically impossible to find out what the DPW and its consultants were doing, and that, in fact, the DPW's policy of secrecy had been so effective that the municipal officials only found out the DPW's recommendations at the public hearing - along with the rest of the public; the city of Cambridge had to write to the DPW for a copy of the report the morning after the public hearing.

Cambridge did have some tentative renewal plans for several sections of the community to be affected by the Brookline-Elm Street alignment, and, especially in the light of the new amendment to the Federal Interstate and Defense Highway Act, collaboration between highway and urban planning had the potential of producing a design alternative which might have been beneficial to the city as well as the highway interests. Cambridge officials labelled the DPW's statement about DPW - municipal collaboration totally false, stating that "... at no time did a representative of the State DPW discuss renewal plans for Cambridgeport, Donnelly Field, or Houghton with the Cambridge Renewal Authority."¹⁴⁸

1963 was a year of legislative and administrative changes. It appeared that the stalemate would soon be resolved; Governor Peabody finally managed to get the DPW reorganized and everyone expected that the new DPW administra-

¹⁴⁷CCAC Newsletter, September 26, 1962

¹⁴⁸CCAC Newsletter, September 26, 1962.

tion would not only be more accountable to the State's chief executive but that it would also be more responsive to the socio-economic problems of the potentially impacted communities. While the governor was not able to get rid of the local communities' veto power entirely, he was able to change it. He threatened to veto the state's entire highway program unless the veto was changes. Thus, he managed to get a piece of legislation through the legislature which was designed to soften the harshness of the municipalities' out-right veto power. A three-man "Board of Project Review" was created to make a binding decision if the DPW and the local communities could not come to an agreement on the alignment and design features of a highway. This arbitration board would have 90 days to make the choice if the municipalities could not come to terms with the DPW.

Mayor Collins of Boston at this time approved the DPW's alignment recommendations for parts of the Inner Belt.¹⁴⁹ While this did of course not mean that local opposition would not continue, most actors anticipated a less stale-mated period ahead. A new five-man team of DPW Commissioners was expected to establish a working relationship between the highway agency and the local officials of those communities which had developed a very hostile attitude toward the DPW. The general mood in highway circles began to change from one of fatalism to one of optimism.

Late that year, on December 30, 1963, the people of Boston, Cambridge, and Brookline were treated to a demonstration of the fact that they indeed

¹⁴⁹ He made it quite clear that he was not willing to accept just any of the DPW's recommendations. He promised his constituency, while campaigning for his re-election, that he would veto any alignment of the South-West expressway because all alternatives appeared extremely disruptive.

Boston Traveller, May 21, 1964

did have traffic problems. A massive traffic jam tied up hundreds of intersections. Many thousand cars were stranded for several hours in what has since been termed as having been something close to the "ultimate traffic jam": the simultaneous blocking of those key links or intersections which are needed to permit vehicles to flow away from a congested area.

Early in 1964 the DPW assigned a team of highway professionals to see what fence-mending needed to be done, and could be done, to get the location-design process for the Inner Belt rolling again. Assistant Chief Engineers Walter Hue and Leo DeMarsh headed this team of about twelve people. One ex-City Councillor from Boston, Patric McDonough, was hired as "Liaison consultant". He was to sell the Inner Belt communities, i.e. Boston, Brookline, Cambridge, and Somerville, on the idea that the construction of the road was really inevitable and that besides that, it would be beneficial to them.

While the attitudes on the parts of all participants may in fact have experienced a real improvement, the highway alternatives under consideration did not. The DPW professionals did not grasp the issues. For example, they missed the point entirely on the issue of aesthetics. They announced in early June 1964 that they aimed "to dress up the bridges and ramp approaches"...; they expressed their willingness to hire an architect who could tell them how to face the stark steel and concrete with stone.¹⁵¹ All this only served to demonstrate that, obviously, these engineers were, themselves thoroughly convinced that a highway structure in its stark concrete and/or

¹⁵⁰ The Boston Globe, June 3, 1964.

¹⁵¹ The Boston Globe, June 4, 1964.

steel was inherently ugly!

Because the alternative Inner Belt alignments were just as disruptive¹⁵² as they had always been, it was slowly becoming evident that even a new less hostile relationship between the DPW and the Inner Belt communities, particularly Cambridge, would in the end lead to the same stalemate. And, sure enough soon the tone began to change again. In the summer of 1964 there was talk of the DPW "laying down a series of ultimatums", terminology which is hardly indicative of cooperation. On June 1, Associate DPW Commissioner, John D. Warner, was running out of patience; he announced that, if the communities were not willing to accept one of the DPW's alignments within another month, the new Board of Project Review would be put into operation. The actors involved in the Inner Belt decision-making, however, had a chance to observe this new Board in operation; this made the DPW somewhat less eager to submit another case to the Board for arbitration.

In September 1964, the three-man Board, composed of former Chelsea mayor Alfred R. Voke, Boston DPW Commissioner James W. Haley, and State DPW spokesman Walter D. Hue, rejected all but a half-mile piece of the controversial South-West Expressway. They sent the DPW's proposal back to the DPW with the following recommendations:

- 1) The DPW should work out more specific design options and present them to Mayor Collins before April 1, 1964.¹⁵³

¹⁵²DPW Commissioner Fitzgerald, in an August 3, 1964, letter to the Boston Globe, gave his arguments why Cambridge ought to accept the Inner Belt. Significant is the fact that the only rationale he offered dealt with the decision-making process, not with the substance of the alternatives, i.e. the anticipated impacts.

¹⁵³One of the reasons Mayor Collins had said he could not accept the DPW's proposal was that their proposal was so vague. (The Boston Globe, Sept. 21, 1964)

- 2) A design advisory committee, was to be made up of all interested state and municipal agencies, should act as "talent coordinator" to produce more responsive alternatives.
- 3) All these agencies make plans of one kind or another; all these plans should be coordinated with each other - and particularly with the highway plans - and vice versa.
- 4) Since the South-West Expressway depends very much on the traffic coming from the Inner Belt, the planning and construction of the Inner Belt should be expedited.
- 5) The highway agency should work closely with the Boston Redevelopment Authority to minimize relocation hardships.
- 6) New legislation has to be drawn up to make sure that impacted people, be they owners or renters, are adequately compensated, - that they be made whole again.
- 7) New legislation should be written to make it possible for the highway agency to purchase suitable vacant land and move houses lying in the highway's corridor onto this land.

DPW officials were not the only ones who deplored the Board's findings; the Boston Herald mirrored the opinion of the business community in its September 21, 1964 editorial saying: "This highway and others in the (highway network) designed to serve Greater Boston have made concessions to local opposition. Highways cannot be built without hurting someone. Certainly city-serving highways cannot. And sooner or later the decision must be made."¹⁵⁴

Meantime Governor Volpe had submitted a bill to the legislature aimed at getting completely rid of the veto, the Boston Globe editorialized the evils of the local communities' veto, blaming its existence on "lobbyists and special interests".¹⁵⁵

Cambridge officials, took to activities such as traveling the proposed

¹⁵⁴The Boston Herald, September 21, 1964

¹⁵⁵The Boston Daily Globe, July 28, August 3, & 4, 1964.

highway corridor by helicopter and visiting the DPW offices to look at available plans. But they still came away shaking their heads; they could not bring themselves to approve the highway.

In case some City Councillors still did not know how a large segment of the potentially impacted residents felt, they were presented, in October 1964, with a petition with 1,200 signatures on it, asking the City Council to take a strong stand against the Inner Belt. City Council discussed having the Planning Board, the Cambridge Redevelopment Authority, and the State DPW study 1) whether the highway was really still justified, and 2) what it would take to run it along the Grand Junction Railroad line. They argued that three developments were sufficiently important to warrant this study; the factors were:

- 1) NASA was considering construction of a large research complex in the vicinity of the railroad line; this would make the planning of a redevelopment project in that area feasible which, in turn, meant that displaced people could be adequately compensated;
- 2) the completion of the Turnpike was beginning to create very heavy traffic flow on some Cambridge arteries, and
- 3) the planned Kendall Square Urban Renewal project was not, but ought to be, included in the location-design decisions.

A mechanism for periodic plan review, labelled the Transportation Coordinating Committee, was created in a memorandum of understanding between Cambridge and the DPW and was signed in September. But it is not clear whether this body ever functioned.

A meeting between DPW Commissioner Fitzgerald and the City Council accomplished not much else than to communicate to the Councillors that the DPW knew what it wanted and was not about to give in: they preferred the Brookline-Elm alignment; they intended to seek a new bond issue to cover

the estimated construction cost of \$55 million; in fact, they anticipated to acquire the right-of-way by 1966 and start construction in 1967. City Council responded by voting unanimously against "any highway route that would displace families and industries".¹⁵⁶

NASA's proposal to build a large research complex brought out some interesting issues. The Cambridge Renewal Authority, of course, wanted the research complex; it gave them the opportunity to refurbish some more of the threadbare industrial area of East Cambridge. NASA officials contacted DPW officials and made it known that they did not want any highway come very close to the complex - which is what the railroad alignment would have done - because it would disturb sensitive instruments in the laboratories. The DPW lost no time in using NASA's objection to a railroad alignment as ammunition against that route. Ironically, the NASA complex was to wipe out a sizable portion of the industry in East Cambridge which the highway was supposed to serve. Perry T. Rathbone, Director of the Museum of Fine Arts in Boston commented in a letter to the editor of the Globe on the DPW's readiness to listen to NASA's objections and the irony of the whole situation. He wrote,

"... It is an interesting - and sad - commentary on our times that Commissioner Fitzgerald of the DPW will consider relocating the Inner Belt for science but not for art and humanity!"

"In his speech before the Fenway Civic Association on October 22, he announced that the Inner Belt in Cambridge would be detoured around the new NASA Laboratories to avoid disturbing the government's delicate testing equipment. He refuses to consider rerouting the road in Boston to avoid disturbing the world-famous collection of the Gardner Museum of Fine Arts, and playing havoc with the equally delicate human mechanisms in the Fenway."

"The irony of the situation is that the criteria for locating

¹⁵⁶The Boston Herald, October 27, 1964

the NASA center here specifically listed the educational and cultural resources embodied in the Fenway complex. Fitzgerald is doing his best to inhibit and tear up this complex in what he calls a "balanced plan" of improvements."¹⁵⁷

In spring 1965 the Federal Highway Administration, Governor Volpe, the DPW, as well as the newspaper editors all made their positions known: they did not like the local communities' veto power over the major highway decisions. Rex Whitton, the Federal Highway Administrator pointed out that since the Massachusetts DPW was not given the decision-making powers it needed to assure completion of the state's Interstate Highway system in time to meet the existing deadline for completion of the interstate system, Massachusetts could not really qualify for the 90% federal funds - unless the veto was removed. Governor Volpe was working on his (formerly Governor Peabody's) accelerated highway program with a scope of \$320 millions, most of it federal money. The papers pointed out that if the highway were accepted now, families would not have to be relocated this year; by the time it had to be done, there might be room in new housing projects. On July 22, the governor ordered a \$250,000 restudy of the Inner Belt in Cambridge, including a study of the alignment along the Grand Junction Railroad.

The message was getting to the state legislators. The Senate's Ways and Means Committee reported a bill, removing the municipalities' veto power, out along with its endorsement of the governor's \$320 million highway bill. At the same time the Bureau of Public Roads put some more pressure on the state. It announced that it was not authorizing any more work on

¹⁵⁷The Boston Globe, November 1, 1964

the Inner Belt or the South-West Expressway until something was done to improve the chances of completing the projects on time.

In spite of all this concern to expedite the construction of the highways, it appears that there was only one single action taken which was aimed to alleviate potential negative impacts. The city of Cambridge asked for, and got, a piece of enabling legislation - applicable only to Cambridge - which would make it possible for the city to pay for relocation costs in cases where these costs were not covered by a state or federal agency.¹⁵⁸

With talk of a restudy in the air, people began discussing alternative design features. By fall 1964 there was, for the first time, talk of depressing the Inner Belt in Cambridge. It was also about this time that Boston University began to wish hard for a tunnel to go under the Charles River rather than the bridge proposed by the DPW. Oddly enough, Brookline saw this as a threat of sorts. The way that municipality's leaders saw it, the DPW might be willing to settle for a relatively expensive¹⁵⁹, i.e. a depressed or tunneled highway, either in Cambridge or in Brookline, but not in both places.¹⁶⁰

¹⁵⁸Relocation costs of people dislocated by a highway, at this time, received no monetary help unless they happened to also be located in an Urban Renewal project.

¹⁵⁹It was estimated that depressing the road in Cambridge and making provisions for using the air-rights would cost an additional \$25-30 million. A tunnel under the river was expected to cost \$22 million more than a bridge.

¹⁶⁰The Chronicle Citizen, July 29, 1965.

DPW Commissioner Warner spoke of using the air-rights to build replacement housing; he considered it entirely feasible to provide also the necessary recreational facilities, i.e. to create a "replacement neighborhood" rather than just the buildings.¹⁶¹

In the September of 1965 a new citizens group, "Cambridge Committee against the Inner Belt" (CCIB), was formed. Its initial membership consisted largely of professionals in the design and planning field who felt that the Inner Belt, as planned, would be so disruptive that something had to be done. Robert Goodman, a young M.I.T. architectural faculty member and Denis Blackett, a local architect, were leaders in the group. While some felt that any expressway through Cambridge was bound to do unacceptable damage and that the only position to take was one of opposing any Inner Belt alignment, others thought that the Inner Belt could not really be stopped and that, therefore, the only useful thing to do was to look for - and get support for - a better, i.e. a less disruptive, alignment than the DPW had in mind. For at least the time being the latter approach appears to have won out. The group decided to make its existence known to the community at large and to undertake a program of educating, via a series of newspaper stories, the public about 1) the severity of the anticipated impacts of the DPW's Brookline-Elm alignment and 2) the possibility of making use of the railroad right-of-way for a less disruptive alignment.

In its efforts to find and make allies, CCIB came in contact with a number of other concerned groups. With two of these, Neighbors United, led

¹⁶¹The Boston Herald, September 6, 1965.

by William Ackerly and Anstis Benfield, and with the Neighborhood Four Association - both of which had their constituencies among people living in the corridor of the road - they combined forces. Together they organized a mass meeting for October 27. The people who attended that meeting got to see some of the old anti-Inner Belt workers: State Representative Toomey, State Senator McCann, - as well as some of the newly emerging highway opponents: Benfield, Ackerley, Blackett, and Goodman. The people present pledged to begin a drive to get signatures on a petition asking Governor Volpe to intercede.

After the October meeting CCIB concentrated on getting more organizational support. They won the Cambridge Civic Association and the League of Women Voters over to their side; both organizations had previously been in favor of proceeding with the road. The group also worked on the Cambridge City Council, trying to get them to abandon their rigid stand against any highway through Cambridge and have them help work out a less disruptive alignment. The City Council and CCIB agreed on the basics; the only disagreement was on strategy. Was working on an alternative alignment too much of an admission that a road was needed? Or, on the other hand, would the city have no influence at all, if it kept insisting that it wanted no Inner Belt at all?

CCIB must have made its point because shortly thereafter the City Council hired Barton-Ashman Associates of Chicago to study the Inner Belt needs, and the DPW promised to hold off with making its final decision until the City Council had an answer from Barton Ashman. In November CCIB submitted its own version of an alignment to the DPW. They proposed the road follow the railroad and then veer off along Portland Street and Albany

Street. Commissioner Sargent assured them he would give the proposal due consideration.

Starting in December, one priest each from the Blessed Sacrament parish and the St. Mary of Annunciation became very active in the movement. Both of these churches were to lose a large portion of their respective parishioners if Barton Ashman reported back to City Council that they found the Portland-Albany alignment feasible, but that they might be able to come up with a somewhat different alternative. City Council asked the consultant to develop an alternative from the point of view of the city, - ignoring interests who owned much of the property along the railroad such as M.I.T.

On December 21, a second mass meeting was held by CCIB; it drew about 200 people.¹⁶² By this time the anti-highway groups had mustered the support of Congressman O'Neill, and he was present to promise that he would do everything he could to prevent the construction of the Inner Belt.

It was much harder for the anti-highway groups to get any support from Senators Kennedy and Saltonstall. Saltonstall wished the groups who visited him well but refused to join the fight. Kennedy stayed aloof as long as he could and then, when he felt he had to come down on one side or the other, in a statement before the Senate's Subcommittee on Public Roads, summarized the problems created by the Inner Belt about as objectively as it had ever been done. He listed the anticipated impacts and the hardships that were bound to result from these impacts; it amounted to dispassionate but nevertheless clear support of the anti-highway groups.

The state had given March 15, as its final decision-date. With that day approaching, the CCIB's petition circulation picked up, the City Council

¹⁶²Fellman, op. cit., p. 29.

got more deeply entrenched in its position by making and listening to anti-highway speeches, and the group of professionals in CCIB who had developed a Portland-Albany alignment made some improvements to that proposal and had State Representative Newman submit it to the DPW. In early March a number of MIT faculty from the City Planning Department took a stand against the highway and made their position known to the governor, the DPW, and to the Bureau of Public Roads.

City Council held a public hearing on February 20, to have the Council's own consultant present the alternative he had developed. Two members of the Barton-Ashman firm presented a new version of a Portland-Albany alignment. They explained that their client, i.e. City Council, had asked them to ignore the needs and wants of M.I.T. in this search for an alternative. The suggested route would have taken M.I.T.'s nuclear reactor, the High Voltage Research Laboratory, several Instrumentation Laboratories, the Cyclotron, the Rockefeller Accelerator, the Hydradynamics Laboratory, two parking garages, and the central chilled water plant. It also would have affected M.I.T.'s National Magnet Laboratory, the Nuclear Chemistry Laboratory, the Cryogenic Laboratory, the High Pressure Laboratory and the power plant.¹⁶³

From that point on, it appears, the meeting became M.I.T.'s. Edward Hanify, counsel for M.I.T., and Dr. Killian, M.I.T.'s Board Chairman, demonstrated what it meant to ignore M.I.T.'s needs and wants.

They gave a detailed presentation of the consequences Barton-Ashman's Portland-Albany alignment would have on M.I.T., and what, in turn, the

¹⁶³CCAC Newsletter, February 25, 1966.

consequences would be for Cambridge, for New England, for the United States economy, for Science, for the United States space program, for the defense posture of the United States and the free world.

While most people questioned the wisdom of the City Council's charge to their consultant of ignoring M.I.T.'s interests, most of the 600 people attending the meeting felt that M.I.T. was reacting with overkill. One older man at the meeting expressed this sentiment well when he said that he was just concerned about loosing his home, that he did not know he was being unpatriotic and sure would hate to be guilty of standing in the way of the security of the United States.

As a consequence to M.I.T.'s reaction at the February 20, meeting, the City Council decided not to propose an alternative of its own to the DPW after all. The CCIB and other anti-highway groups felt that this would only work into the hands of the DPW, and they pleaded with City Council to submit one of the Portland-Albany alternatives.

Instead of backing an alternative, City Council decided to see if it could not somehow strengthen its position of being opposed to any expressway. In early March a number of the Councillors went to Washington to talk to Federal Highway Administrator Whitton and to solicit Congressman O'Neill's support for a complete restudy of the Cambridge Inner Belt.

On March 15, 1966, DPW Commissioner Sargent announced the DPW's selection of the Brookline-Elm Street route. He justified the choice of Brookline-Elm over the Portland-Albany route on the prediction that the latter would eliminate about three times as many jobs as Brookline-Elm would. There were, however, no facts available to substantiate this claim, and the

Cambridge groups called it an outright untruth.¹⁶⁴

It turned out in a subsequent meeting between the governor, several DPW officials, and some of the CCIB leaders that the DPW never had gotten around to taking a very good look at CCIB's suggestion for a Portland-Albany route. Now Cambridge and its local groups asked for a complete multi-disciplinary restudy, directed by prominent lay people rather than by highway professionals.

The DPW had made some efforts during winter 1965-'66 to produce innovative design solutions, but there was no evidence that the alternative which Sargent chose on March 15 made use of any of these designs. Architect Campbell, Aldrich, and Nulty and the Clarkson Engineering Company had been developing some designs for the Boston section of the Inner Belt which were aesthetically very attractive. The internationally respected Architects Collaborative in cooperation with Goodkind and O'Dea, Engineers, developed designs for a depressed highway in Cambridge with such features as overhanging local streets. Sometimes in March DPW officials, several engineering consultants, and collection of Boston's best-known architects spent an evening together at the Harvard Faculty Club. Mrs. Hasken who was a columnist for the Sunday Globe and Associate DPW Commissioner Warner had engin-

¹⁶⁴The impact figures quoted varied considerably depending on the date and the source. The dollar costs varied from \$37 millions to \$65 millions; the dislocation of families varied from 141 to 1,500. The Brookline-Elm routes had the lowest projected cost and the highest dislocation of families. The Barton-Ashman proposal had the highest predicted cost, highest job dislocation, and a relatively high family dislocation. The CCIB's Portland-Albany route projected a medium cost, lowest job dislocation and lowest family dislocation.

The Boston Globe, February 14, 21, 1966
The Boston Herald, December 3, 1965

eered the informal get-together in the hope that some way would be found to get some aesthetics into the highway designs being produced by and for the DPW. When the chips were down and the location-design choices had to be made, the architects did not prevail. The designs were the standard earth embankment-elevated highway; when a depressed highway was considered, those designs were standard also; none of the new ideas were used.

It appears that the City Councillors' trip to Washington and the petitioning of the local Congressman by his constituents worked. In late March Congressman O'Neill made it known that Federal Highway Administrator Whitton had agreed to fund a 8-12 month restudy.

Because most of the people in the corridor of the Inner Belt had, in spite of all the protest, never been involved in any of the protest, the rest of spring 1966 consisted of a sequence of neighborhood rallies at churches and schools in an effort to involve a greater number of them. The priests began distributing anti-highway hand-bills, and they announced the coming rallies from the pulpit. The summer, however, saw activities die down again.

Some of the CCIB leaders felt that someone should undertake a study of the Boston transportation system.¹⁶⁵ When a few anti-highway leaders went to Washington in late summer of 1966 they realized that the federal officials were under the impression that since there had not been much

¹⁶⁵In the summer of 1966 eight CCIB members joined together to form Urban Planning Aid, Inc. The group adopted the goal of providing planning help for low and moderate income groups who normally could not get any professional help; they became "advocacy planners".

anti-highway activity in the summer, the opposition to the road had gone away. CCIB and all other groups decided to do everything they could to change that image.

Neighbors United, CCIB, St. Mary's Church, Blessed Sacrament Church, the Central Square Ministers' Association, and the various other groups joined together in fall 1966 and called themselves United Effort to Save Our Cities (SOC). This conglomerate of neighborhood groups and the several local political leaders who had become deeply involved in the Inner Belt controversy worked hard to keep the issues before the people's eyes, to get them to take some active role - be it circulating or signing petitions, writing to legislators, etc. These efforts included the holding of frequent neighborhood meetings and later the staging of protest marches. In October the City Council appropriated \$1,500 for SOC to publicise and organize its first large public demonstration. To impress on the governor the depth and breadth of the opposition to the DPW's plans for Cambridge, a protest rally was organized for the Boston Commons and the State House for October 15. Even though the neighborhood rallies were never able to attract any great numbers of people, this demonstration had 500-600 participants.

Meanwhile City Council appropriated \$2,500 to hire legal counsel to fight the Inner Belt as effectively as possible and to have an engineering firm produce a study to demonstrate that the road was not needed.¹⁶⁶ Con-

¹⁶⁶Note that the City Council used precisely the approach they normally accused the DPW of using; they developed a policy and then, after having done that, they tried to construct a rationale, a justification, for having adopted the policy.

gressman O'Neill also passed the word along that he received assurances that the road would be delayed for at least a couple more years. With this information in hand the Council took a very clear position against any highway; some members had still been working on an alternative.

When Governor Volpe gave the official word shortly before election day that there would be a restudy, the pro-highway Chambers of Commerce labelled his decision a "political move".

Most people wanted to find an alternative route to the Brookline-Elm Street route; Governor Volpe allowed SOC to come up with an alternative route before a final decision was to be reached. The move by the Governor in October 1966 to suspend action in Cambridge, pending a re-study appeared to be the result of the September 1966 march to the State House. McManus, Goodman, Blackett, and a DPW engineer appointed by the Governor were in charge of the preparation for an alternative route to be submitted one month later, in February, 1967. In addition to this plan the Cambridge Citizens Advisory Committee to the Governor submitted its version of a Portland-Albany alignment to the DPW. This proposal was a new one; it differed from earlier ones that had been rejected by the DPW. Cambridge City Councillor Vellucci, hearing of the recommendations made by the Governor's Citizen Advisory Committee came out with a statement of disapproval of the Committee's stand. He emphasized that the citizens of Cambridge were opposed to "any and all Inner Belt routes coming through Cambridge". However, Vellucci's stand did not remain entirely consistent. Upon returning from a trip to Washington, D.C., he reversed himself by stating that he was for the Inner Belt.¹⁶⁷

¹⁶⁷Record American, January 27, 1967

The SOC resident group maintained its schedule of bi-weekly meetings. Other groups began to take an interest in the controversy and some of them began to re-evaluate their earlier positions on it. The League of Women Voters, for instance, had originally endorsed the Inner Belt through Cambridge proposed by the DPW. In May 1967, the League switched its position by taking a stand opposing the Brookline-Elm route, and favoring the Portland-Albany alignment. The Cambridge City Council in Spring 1967 was considering involving itself actively with a number of M.I.T. and Harvard faculty who had shown interest in opposing the Brookline-Elm route. A statement criticized the destructiveness of the Inner Belt in general and the Brookline-Elm alignment specifically.

Mayor Bretta of Somerville had no use for the Portland-Albany alignment; he predicted that it would cost his city considerable taxable property and at least 200 jobs. The Brookline-Elm alignment, on the other hand would help him create an industrial park. He therefore urged the DPW to proceed with building its highway; he felt the delays which had occurred were due to the unreasonable demands of a vocal minority,² - i.e. the Portland-Albany proponents and the out-and-out opponents.

The press was of little or no help in having the community come to grips with the issues that underlay the controversy. An example of the kind of fuzziness and confusion it helped to spread either by design or by trying to be in favor of all sides simultaneously can be seen in a May 1967 edi-

²The Boston Globe, April 25, 1967

torial.³

"Governor Volpe is scheduled to announce his decision on the route of the Inner Belt through Cambridge. We hope that last minute protests will not mean more delay."

A few lines further on the editorial cites the plea for a freeze on the highway by a group of Harvard and M.I.T. professors who, the paper said, were "responsible, respectable, and wrong". These professors were questioning whether "in view of major new developments which have occurred since the Inner Belt plan was conceived twenty years ago", the road should be built.

The editorial went on,

"The fact is that the plan has not been gathering dust for twenty years. It has been restudied and reaffirmed by the DPW as late as 1962. A Blue Ribbon Design Advisory Panel of architects, planners, urban designers, and prominent citizens met in 1965 with the DPW and helped refine the plans. Yet many delays, some practical, some political, have prompted just fears of the project being "studied to death"

"Urban highways of course are monsters. Hopefully ways will be found to keep automobiles from choking our cities and eliminate the need for concrete monsters. That day, however has not yet come. The Governor's choice is hard, but clear."

Politicians - not unlike newspaper editors, but more understandably tended to make similarly ambiguous statements; they did not dare support the DPW openly on the Belt issue - no matter what they thought privately. When one Cambridge official, City Planner Alan McClennen, had the courage to speak out, the City Council tried to fire him.⁴

The Cambridge clergy, legislators, and city officials responded unani-

³Boston Herald, May 12, 1967. This is just one example of the typically confused mix of hypotheses, assertions, and truisms that were being written up and spoken on formal occasions.

⁴The Boston Globe, May 14, 1967

mously with bitter protests to the Governor's May 14th announcement that "the Brookline-Elm route is the State's choice for the Inner Belt through Cambridge". Some Cambridge City Councillors might have had an attitude of resignation but Councillor Vellucci, who had vassilated between pro and con stands, this time said, "Our fight is not here locally. Our fight is in Washington!"⁵ Mayor Bretta of Somerville called Volpe's decision "courageous".

Volpe expected that construction of the Inner Belt along his alignment choice would be completed in four and one half to five years. Land-taking was to begin in April 1968. The cost was estimated \$127.8 millions; the corresponding figure for the Portland-Albany alignment was estimated - also by the DPW - to be \$162,9 million. While the Brookline-Elm route would destroy 1,669 homes and eliminate 2,715 jobs, the Portland-Albany route would only displace 656 families, but would cost 7,131 jobs.⁶

On May 25 nearly one hundred people from Cambridge and Somerville, including some children, chartered two buses for a trip to Washington where they met with Senators Edward M. Kennedy, Edward Brooke, and Congressman Thomas O'Neill. The group's spokesman in stating the purpose of the trip said, "We come in a spirit of pleading. We come seeking justice". Through an appeal to the senators and congressman, they hoped to get serious consideration for their proposed Portland-Albany route. They felt, the citizens' choice, i.e. the Portland-Albany alternative, was not given a fair evalu-

⁵The Boston Herald, May 15, 1967

⁶The Boston Herald, May 15, 1967

ation. "From the beginning of the study it became clear that only one route would be studied ... We were told we would have time to prepare a review. But Commissioner Ribbs of the DPW refused to give us access to the report. Two weeks ago we were told the route and given the report." Goodman took issue with the DPW statistics which indicated massive job displacements would result from the Portland-Albany alternative: "A spot check of six firms showed the state figures are off by 80 to 90%".⁷ Senator Brooke expressed dismay that the Portland-Albany route did not appear to have been considered more seriously. Senator Kennedy's response to the one hundred citizens who had come to Washington was that, "This is not just a problem that affects you, the Cambridge and Somerville residents. You represent something far beyond this - the relationship of a program to people". Kennedy further pointed out that the master plan for transportation was formulated twenty years ago; he would like to study how the Inner Belt is integrated into that general study. Aside from the Senators and Congressman O'Neill - who during a meeting with the citizens came up with the suggestion of a depressed highway along the river - the group also went to see Lowell Bridwell of the Bureau of Public Roads. Bridwell's response to the group's pleas was that he would have his people check the discrepancies between the DPW and the Citizens' statistics.

Several City Councillors were among the men, women and children who made the trip to Washington; they met with the citizens at the government agencies, using taxis for their personal transportation. The citizens group

⁷The Boston Globe, May 25, 1967

on the whole made the impression of a determined people; although they were visibly tired after the day's activities, they maintained their good behavior and patience.

Three days after the Governor's announcement, plans were prepared by Cambridge City Councillor Crane, through Congressman O'Neill, for having "a small, prestigious committee" meet with top administration officials in Washington and members of the Massachusetts delegation there.⁸

In June, eight City Councillors met in Washington with Rex Whitton's successor of the Federal Highway Administration, Lowell Bridwell, to state their total opposition to a road through Cambridge. Representative Thomas O'Neill, the only consistent anti-Belter among the elected federal office holders, arranged and led that meeting. Little active support was given by either Senators Kennedy or Brooke, although both had expressed concern about the road. Congressman O'Neill had by now taken the matter to Vice-President Humphrey who after consulting with Alan Boyd, Secretary of the Department of Transportation, informed O'Neill that nothing could be done. Meanwhile speaker of the House, McCormack, also took a position. He told O'Neill that the Belt would never be built along the Brookline-Elm alignment as long as he was Speaker. The only problem with that kind of support was that McCormack was very old and was expected to retire very soon.

Late in August 1967 a special meeting was called by SOC leaders. The meeting was arranged because Westinghouse had asked to film SOC activities for a public service advertisement, showing democracy in action. Approximately three hundred people were present. While the cameras kept snapping,

⁸The Cambridge Chronicle, May 18, 1967

people were informed of the progress of discussions with Federal officials. The event however turned into more of a rally with many highly emotional statements from the floor as well as from SOC leaders. It was not really a typical meeting.

On September 13, at a meeting with local officials, BPR Commissioner Bridwell granted a restudy of the Inner Belt situation. "Local residents began congratulating themselves that they had finally had an effect".⁹ Cambridge residents were further heartened when, on October 15, Cardinal Cushing, who had two years earlier permitted several Cambridge priests to work in SOC, himself announced opposition to the road.

In November 1967, Mayor Hayes of Cambridge announced the formation of an Advisory Committee, "The Mayor's Committee on the Inner Belt". Its members included eminent Harvard and M.I.T. faculty members, some of whom had recently signed a petition opposing the Brookline-Elm route and favoring a restudy of the broader highway issues.¹⁰ While SOC continued, through Urban Planning Aid men Blackett and Goodman, to pursue its advocacy of the Portland-Albany route and the City Council continued to adamantly oppose all possible Belt routes through Cambridge, the Advisory Committee worked out a two-pronged proposal, urging BPR on the one hand to finance yet another study to determine whether the Belt and its radial system really was the most efficient solution to the Greater Boston traffic problems and suggesting on the other hand to pursue Joint Development

⁹Gordon & Fellman, op.cit., p.43

¹⁰G. Fellman, op.cit. p.43,44.

of highway and housing resources, similar to the solutions recommended recently in Baltimore¹¹.

At a SOC meeting in late 1967 Father McManus passed around a photograph from Broadcast magazine which was, to his knowledge, the only place the Westinghouse pictures appeared. The caption on the photograph read that "Every Thursday, people in Cambridge, Massachusetts meet to defy the Federal Government". (sic: the meetings are held, on the average, once monthly, and meet for the purpose of opposing the Brookline-Elm route, not defying the Federal Government. Ironically, the reverse is true; people meet to figure out ways to convince the Federal Government of the justice of their case). Further comments at the meeting were to the effect that the Cambridge City Planning Office - which had originally made the Brookline-Elm alignment proposal - was "out of the (Inner Belt) matter altogether".¹²

When the City of Cambridge in 1967-'68 made its application for participation in the federal Model Cities program, it delineated an area right in the path of the proposed Inner Belt to be its Model Cities project's mandate to provide for meaningful citizen participation. Cambridge's application went far beyond other applications in this aspect. The city government committed itself, by means of a special ordinance, to give the local residents in the Model Cities area the veto over any government action affecting their area.

The fact that this strengthened the highway opponents' position considerably was no accident. While the people who were very much wrapped up in stopping the Inner Belt saw the designation of the Model Cities area

¹¹Fellman, op.cit. p.45,44.

¹²Fellman, op.cit. p.45

as a very clever tactical move, those who were looking to the Model Cities concept as a last chance to come to grips with wide range of urban problems felt that Model Cities was far too important to be used as a tactical weapon in the anti-highway fight.

By February 1968 the word was out that the BPR was willing to fund an in-depth, two-three year study of the Inner Belt controversy. The director of Urban Planning Aid, however, cautioned the people; he claimed that the real inside information was that Federal Highway Administrator Bridwell actually had only two six-month studies in mind.¹³

The two studies were to achieve the following:

Task A: EMRPP is to undertake a transportation analysis specifically excluding the Inner Belt because this has never been done.
The planning assumption to be developed by MAPC with participation of Boston, Somerville, Cambridge, and Brookline.

Task B: Further development of proposed Brookline-Elm route and alternatives to it; design considerations and solution range.

Both tasks were to be carried out simultaneously.¹⁴

Task A of the six-months Bridwell study was considered to meet the Mayor's Advisory Committee's demands at least part-way. The Committee had recommended a two year study; however the study was curtailed to six months.

The second part of the Bridwell study proposed a joint development approach recently pursued in highway planning in Baltimore and Chicago. The multi-disciplinary "urban concept" used in those cities was to bring

¹³Fellman, op.cit., p.46

¹⁴Memorandum on the Inner Belt, March 7, 1968, from Federal Highway Administrator Bridwell to F.C. Turner, Director of the Bureau of Public Roads.

together a team of sociologists, political scientists, environmental and behavioral scientists, along with economists, architects, engineers and land planners.¹⁵ These professionals were to attempt to define the needs of the people who work and live in the environs along the route of a highway. To achieve this goal it would be necessary that two-way communication be established between those people who are affected by the highway and the highway professionals. To implement this plan it was suggested that the DPW should "establish readily accessible offices and encourage people from the affected communities to visit, explain their points of view, and receive information on the planning project".¹⁶

At a SOC meeting in April, a letter was read in which SOC urged the Mayor's Advisory Committee to see to it that the City Council get to play a meaningful role in this restudy as well.

In March, Father McManus informed SOC people that the City Council considered having a referendum on the Belt issue on the upcoming election ballot. But both the SOC Executive Committee and the City Council eventually decided that a referendum was not really desirable because "some ornery people might vote for (the Inner Belt), that it might somehow get mixed up with voting for or against Senator Eugene McCarthy and annoy President Johnson and that (the referendum) might anger Bridwell".¹⁷

Meanwhile the idea of "joint-development" began to become acceptable. Mayor Sullivan suggested augmenting the DPW's list of contracting consultants with organizations which have,

¹⁵The Metro Citizen, Vol. 2, No. 2

¹⁶Memorandum from Bridwell, op. cit., pp. 8-9.

¹⁷Fellman, op. cit., pp. 47-48.

- 1) done work in developmental planning
- 2) have experience other than highway engineering
- 3) have not been involved in the Inner Belt so far.

These, he proposed, should be considered for joint development research. In his opinion the DPW's list of twelve contractors is "seriously in need of augmentation". He submitted a tentative list of recommended firms. The DPW's response to the suggested contractors was as follows. The DPW agreed that the suggested contractors could be part of a joint concept team but could not be prime contractors.¹⁸

In May 1969 the Social Responsibility Committee of the First Parish, First Parish of the Unitarian Church in Cambridge, Harvard Square, sponsored a meeting on the "Inner Belt - Yes/No". The DPW representative was the only person speaking in favor of the Inner Belt. Several people from the public spoke against the highway; their issue- as the title suggests - was highway versus NO-highway; not just a matter of location or design. The question arose whether the anti-highway people should cooperate so that the highway will be built on their terms. It was feared that out-and-out opposition may result in having no chance for an input in the highway decision-making. Professor Adams suggested that if the energy of arguing for and against the highway were put into solving problems that exist in the community, the community would be farther along providing a better living environment. During that same meeting a private citizen testified that - at one time - he had submitted his own regional plan, but that so far, no one had given it serious consideration. He argued

¹⁸Remarks by Federal Highway Administrator Lowell R. Bridwell at the Highway Research Board Conference on Joint Development and Multi-Use of Transportation Right-of-Way, Washington, D.C., Friday, November 16, 1968.

that his own proposal was better than any of the professionals' proposals.

James Morey, Urban Planning Aid director, reminded the people present that, first, benefit-cost analysis does not include all costs; second, all studies still rest on the assumption of implementing the 1948 plan, and third, building an expressway system makes working on a better transportation system infeasible. He further observed that the Bingham bill proposes to let it be up to the Governor's discretion to spend highway trust fund money for highways or mass transit. Because the official agencies have always made this a "take-it-or leave-it" issue - not a democratically decideable issue, Morey suggested, that the proposal therefore has to be opposed. - He added that the Governor, however, was thinking to appoint a high level task force which may suggest the study of an entirely different alternative.

In April 1969 Commissioner Ribbs made public some of his latest cost estimates and completion dates for the Inner Belt. With regard to replacement costs he had the following to offer. To highway affected owners he proposed a solatium of \$5000, to renters \$1,500, and to businesses and others full moving expenses. The total cost would run to \$ 300 millions with an annual increase of 8% due to inflation. The completion date was set for 1974-75, five to six years from the end of 1969. The cost of land in Cambridge was estimated to amount to \$ 20 millions.

In response to the all-around dissatisfaction with highway planning, rapid transit planning, and transportation planning in general, Governor Sargent, in 1969, created a Steering Group on the Boston Transportation Planning Review. This Task Force was, under the direction of Professor

Alan Altshuler, "to begin a fundamental reexamination of the Commonwealth's transportation plans and policies.

SOC spokesmen for regional conglomerates of anti-highway organizations, Boston Mayor White and Cambridge City officials argued that this fundamental review would have no meaning unless all highway construction, right-of-way acquisition, and engineering work were stopped while the restudy was in progress.

When Professor Altshuler and his Task Force recommended essentially the same thing, Governor Sargent announced in February 1970 that most work on the Inner Belt segments in Cambridge and Somerville - would be suspended for the time being.

¹⁹ Summary of Study Design for a Balance of Transportation Development Program for the Boston Metropolitan Region, Alan Altshuler, November 1970.

Index of Abbreviations in Chapter XIII

BRA	=	Boston Redevelopment Authority
BPR	=	Bureau of Public Roads
BSAS	=	Beverly Street Area Subcommittee
CBD	=	Central Business District
CCA	=	Cambridge Civic Association
CCAC	=	Cambridge Citizens Advisory Committee (also CAC)
CCIB	=	Cambridge Committee Against the Inner Belt
CPB	=	Committee to Preserve Boston
CSBB	=	Committee to Save Boston Business
CSNE	=	Committee to Save the North End
DPW	=	Department of Public Works
EMRPP	=	Eastern Massachusetts Regional Planning Project
HSAS	=	Hanover Street Area Subcommittee
HSAS	=	Haymarket Square Area Subcommittee
MAPC	=	Metropolitan Area Planning Council
MDS	=	Market District Subcommittee
MIT	=	Massachusetts Institute of Technology
NASA	=	National Aeronautics and Space Administration
SOC	=	United Effort to Save Our Cities
SSAS	=	State Street Area Subcommittee
UPA	=	Urban Planning Aid

CHAPTER XIV

BROOKLYN LINEAR CITY, BROOKLYN, N. Y.

XIV.A. Sequence of Major Events

XIV.B. Linear City

XIV.C. A Plan for Planning

XIV.D. Implementation

XIV.A. Sequence of Major Events

An expressway link connecting the Williamsbury Bridge on the west side of Brooklyn with the Nassau Expressway to the east of Brooklyn was part of the state's planned highway network since the 1930's.¹ This highway through North Brooklyn, called the Bushwick Expressway, was removed from the state's plans in 1966. The 7-mile highway was expected to displace close to 4,000 of the middle and upper-middle income families of North Brooklyn as well as several hundred businesses. Residents in the anticipated right-of-way succeeded in getting a bill² passed in the state's legislature which substituted a Cross-Brooklyn Expressway, linking the Nassau Expressway with the Verrazano Bridge, for the Bushwick Expressway. De-mapping the Bushwick Expressway had the effect of stopping all planning work by the state Department of Transportation for the highway's construction. Even though its substitute, the Cross-Brooklyn Expressway, would be 10 miles longer, it promised to be less disruptive³ than the Bushwick Expressway because it could follow an un-

¹It had its origin in Robert Moses' "Stiltway Plan".

²This highway was defeated in Albany rather than by local organizing of the residents. One of the residents whose home was threatened by the Bushwick Expressway was Anthony Traviata, Speaker of the House, who introduced the de-mapping bill (Arterial Highway Law c. 803).

³The Bushwick Expressway was expected to be 7.8 miles long, cost \$180 million, and displace 3,850 families and 354 commercial buildings. The early predictions of a Cross-Brooklyn Expressway were based on a fairly conventional highway, 17 miles long, costing \$230 million, and displacing 500 to 1,000 families - depending on it being single level or double-deck facility.

der-used railroad alignment for much of its route. Many of the communities through which it would go were in transition and some, in fact, were quite deteriorated; their representatives in Albany could not muster the well-connected opposition to the bill substituting the one highway for the other that the North Brooklyn residents could bring to bear against the Bushwick Expressway. The federal government, however, was not willing to make the substitution of one highway for the other on the interstate system quite as readily as the state and the city were. Only after the Tri-State Transportation Commission ran a simulation model of the resulting transportation network and predicted an acceptable performance level did the BPR accept the Cross-Brooklyn Expressway as a substitute for the Bushwick Expressway.

At about the same time that the Cross-Brooklyn Expressway was substituted for the more northerly alignment, East Central Brooklyn was in the midst of a controversy over the construction of new schools. The New York City Board of Education had proposed to build seven new neighborhood schools in the communities of Midwood Flatlands, Canarsie, Flatbush - East Flatbush, Brownsville, and East New York. Parents in Brownsville objected to the School Board's plans because, they held, building schools on scattered sites would not alleviate the existing problem of de facto segregation in the public schools and would, in fact, contribute to further segregation. They asked that the School Board build one large educational park⁴ located near the racial barrier. The facil-

⁴preston Search, who was Superintendent of Schools in Los Angeles, was the author of the educational park concept around the turn of the century. A school was to be built in a pastoral setting and serve, beside

ity was to serve at least 15,000 students in the intermediate grades of East Central Brooklyn by providing them with an integrated school. These kids would otherwise be attending schools which were either predominantly black or predominantly white.

Because the School Board intended to build some of the planned schools immediately, the parents asked the State Commissioner of Education for an injunction to prevent the Board from proceeding with construction until the proposal for an educational park could be studied. In spring 1966, Commissioner Allen granted the injunction on the basis that, if the construction of neighborhood schools⁵ proceeded, the option of implementing an educational park would no longer be available - no matter what merits a study of the proposal might disclose. During the summer of 1966 the School Planning and Research Division of the New York City Schools developed a compromise scheme. They proposed building two educational parks and three intermediate-grade schools on scattered sites.

Both sides to the conflict, i.e. the parents and the School Department, based their arguments on the same data. The parents held that the process of racial segregation could be reversed by the strategic placing of the school complex; the school administration, arguing from the same base of school statistics, held that the area, which was proposed by the parents as a site for the educational park was in transition and that the

the educational needs, the whole community as activity center. The park was to provide the means for experimenting with educational innovations.

⁵The schools which were affected by the temporary injunction were:

primary schools 245, 347, 237, and 301
and intermediate schools 363, 326, 366

exodus of whites would accelerate as a result of the proposed scheme. This, they concluded, meant that the parents would achieve just the opposite of what they really wanted; instead of integrating the schools, they would wind up not only with segregated schools but also with completely segregated communities. Both parties to the controversy used professional statisticians and appeared convinced that if they had the resources and time for a thorough demographic analysis their respective, i.e. opposite, arguments would be proven right. In the fall of 1966, the School Board engaged an educational research organization, the Corde Corporation, which had been studying the feasibility of educational parks in three cities,⁶ to evaluate the parents' plan as well as the school administration's compromise proposal.

While the Corde Corporation did not have the opportunity to engage in a thorough demographic analysis, they did generate some predictions⁷ of future school enrollment for the East Central Brooklyn area which suggested that

- 1) both the school officials and the parents were under-estimating total student enrollment;
- 2) the expected change in racial make-up of the student population had the potential of lessening racial segregation.

⁶The study was supported by a grant obtained through the Elementary and Secondary Education Act, Title III. Boards of Education of Baltimore, Philadelphia, and New York administered the grant.

⁷They used a percentage survival method which projected that by 1972 there would be 2,658 students more than the 15,000 the school officials expected; 2,032 of these, the Corde Corp. said, would be white and only 626 would be Negro or Puerto Rican.

Corde Corp., A Report on the Education Park, (Wilton, Conn.: The Community Research and Development Corp.), pp. 69, 70.

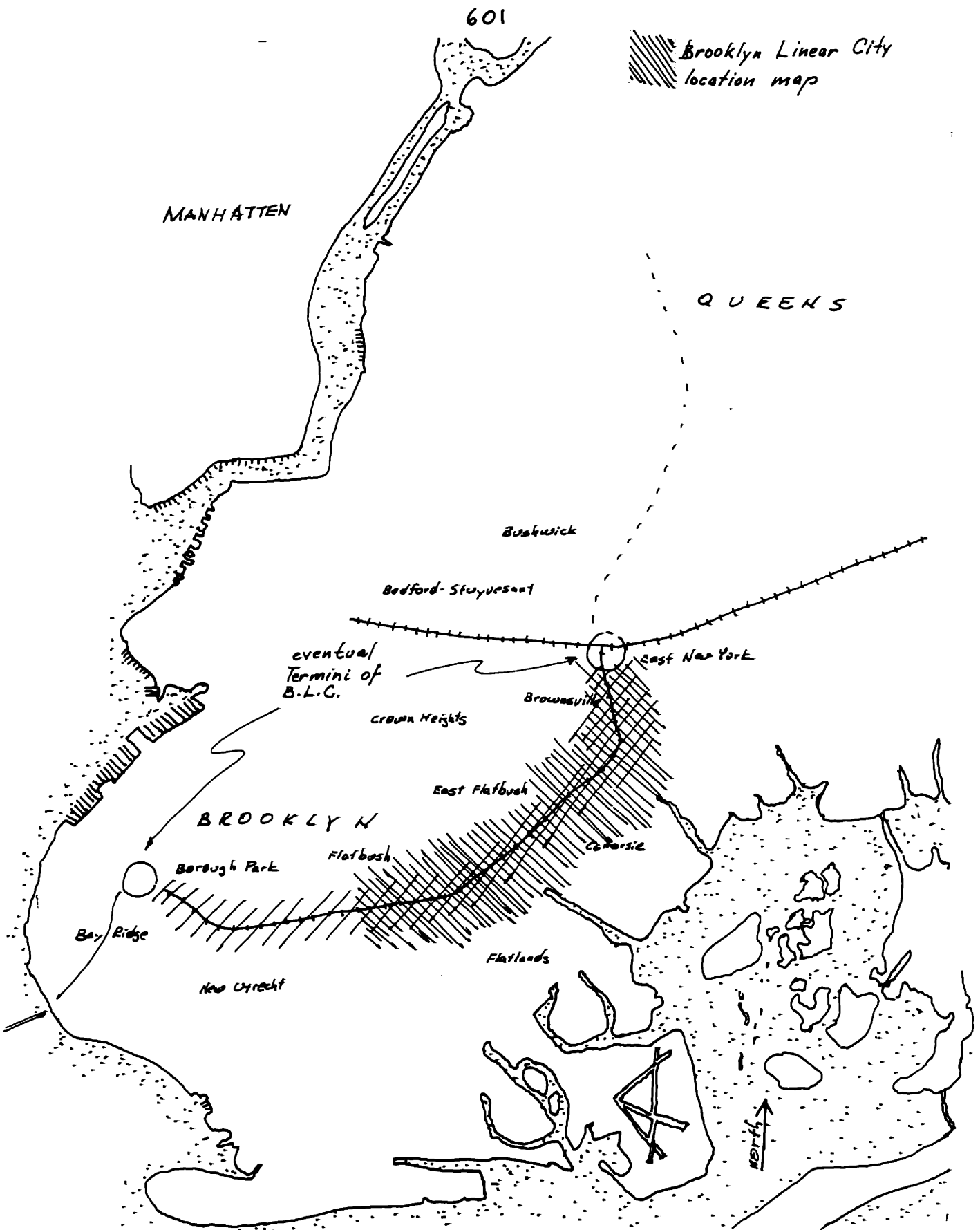


FIGURE XIV-1: Brooklyn Linear City Project Area

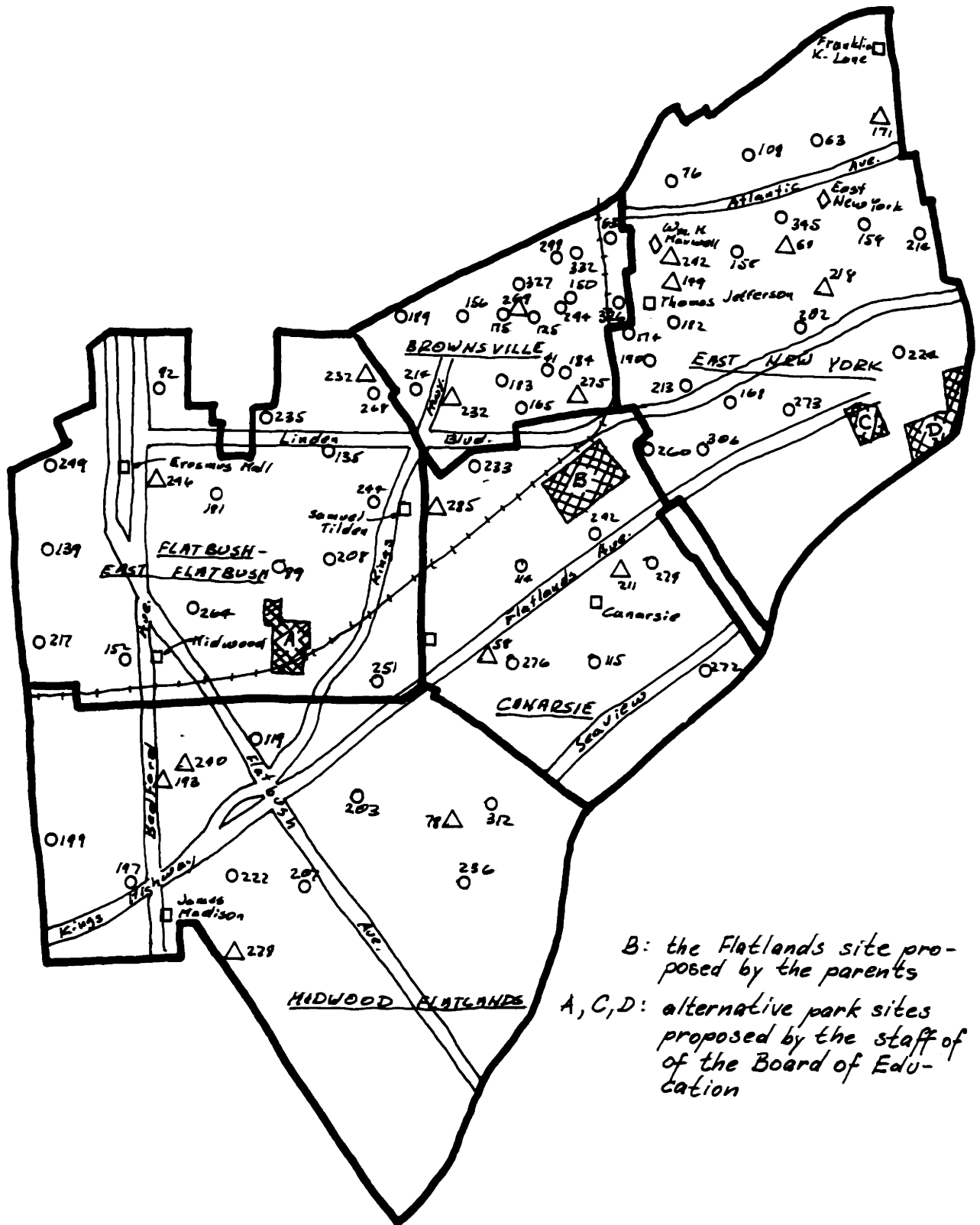


FIGURE XIV-3 : Educational Park Proposals in Central Brooklyn

In addition, the Corde educational researchers pointed out in their report that neither the parents nor the School Board had taken account of the fact that the state was planning a highway - the Cross-Brooklyn Expressway - through the area in question. The highway, besides cutting through two of the school sites, would tend to frustrate the professed aim of both parties in the school controversy - i.e. reversing the trend of increasing racial segregation - by providing a massive physical barrier along the existing Mason-Dixon line separating the white, Jewish community of Canarsie to the south from the Negro and Puerto Rican community of Brownsville to the north.

XIV.B. Linear City

The Corde Corp., rather than endorse one of the two proposals they were given to evaluate, spelled out the shortcomings of each and then proceeded to make a planning proposal of its own. It suggested that the large public investments for a highway and for schools did not need to be in conflict with each other, that, in fact, the two could complement each other and could be used to realize a number of the communities' goals. They proposed the Cross-Brooklyn Expressway be designed as a linear city,⁸ incorporating a series of public schools as well as other needed community facilities in the air-rights over the highway and over rail transportation. The proposal was not a specific design solution. Corde stressed that all it could advocate, based on the very short study,

⁸Le Corbusier had argued in the 1920's, that Linear City was the most appropriate form for housing our urban functions which depended so much on linear movement.

was not a concept. The idea of perceiving all anticipated major public interventions in the urban fabric - no matter by which agency it would be carried out or funded - as a potential key to solving the community's problems constitutes the essence of that concept.

Not only was the Corde idea of a Brooklyn Linear City (BLC) well received by the New York City Board of Education, the Lindsay administration embraced it immediately. Don Elliot, director of New York's City Planning Commission, recognized the concept's potential for achieving great improvements for Brooklyn. The planned highway, once it was seen as a public investment in an area, could be used to bring about massive changes; it represented a much larger sum of public money than the Planning Commission could ever bring to bear on one area. The vision of introducing, within a very few years, a spine that was rich in community facilities and that would spark spontaneous new industrial development in the communities' backyard caught fire. The drab, and often delapidated areas along the railroad right-of-way would, without causing major disruption, become a life-line of wholesome activities. The various communities could be visualized making an about-face in more than one sense; instead of the transportation corridor being a barrier between communities, it would become the common center for all sorts of activities - it would become a very busy inter-communal interface. The communities would come to face each other by sharing the public schools, colleges, health and recreational facilities, new housing, and commercial developments, etc., which would be built in BLC.

In February 1967 a press release was made outlining all of these hopeful and rather idealistic thoughts. The illustrations which the

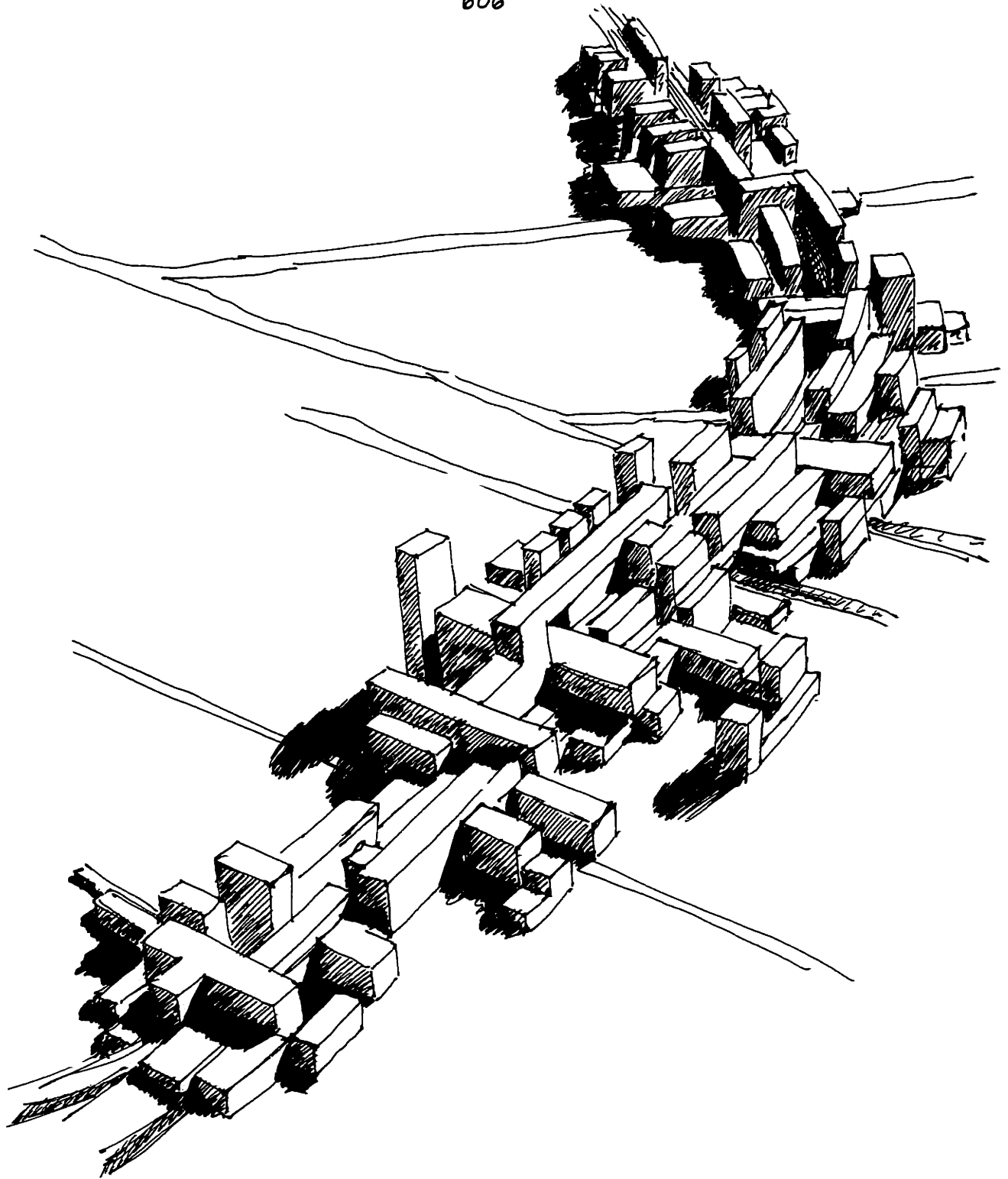


FIGURE XIV-4: Linear City and Cross Brooklyn Expressway Concept

Corde Corp. had stressed it was including in its report only as illustrations of the general linear city concept rather than as illustrations of BLC in particular were also published and made it appear that a considerable amount of preliminary planning had already taken place.

The city administration first tried to deal with the development of plans for BLC much in the same way they might have dealt with any large architectural project. In early spring of 1967 the City Planning Commission hired the well known architect Kevin Roch to design BLC. Once he became aware of the multitude of jurisdictional problems of the many public agencies and private interests which had to be resolved before one could start designing a physical facility, he resigned his commission. When Lloyd Garrison later that spring approached Nat Owings, of Skidmore, Owings, and Merrill, with the design offer, that famous architectural office refused.

By July the City Planning Department finally realized that BLC was far more than a large architectural project. They engaged Archibald Rogers, of the architectural and planning firm, Rogers, Taliaferro, Kostritsky, and Lamb (RTKL), in Baltimore, to develop a plan for planning BLC. The Ford Foundation provided the funding for this meta-planning project. Within two months Rogers delivered the report that he and his staff had created to the City Planning Commission.

XIV.C. A Plan for Planning

Because Rogers' report became the basis for the city's subsequent effort to make BLC a reality, we need to look at an outline of its chief proposals. The report proposed a number of goals for BLC and then pro-

ceeded to recommend measures which were designed to achieve these goals.

The report held a plan for realizing the kind of BLC that Rogers and his immediate lieutenant, Brady Armstrong, envisioned. They saw BLC not as a marginal improvement in the way urban activities typically come to interact with each other; they saw it as a prototypical, working laboratory where a philosophy of cooperation between all different interests would prevail and an optimum urban environment could result, bending each function and investment for the benefit of society.

1) Goals for the expressway⁹

- a) The highway is to be a link in the federal interstate system.
- b) A balance of truck, passenger, and mass transit vehicles are to be carried by the highway.
- c) "The expressway is recognized as a public facility creating opportunities for development over, around, and under it including - but not limited to - Linear City. These developments are to be used to minimize the environmental values created by the expressway."
- d) The highway alignment is chosen in order to minimize relocation.
- e) New innovations in transportation technology are to be provided for - as far as is feasible.

⁹The goals for the expressway, for BLC and for the design and development process are paraphrased, and in part directly quoted from Plan for Planning, pages 5-9.

Rogers, Taliaferro, Kostritsky, Lamb, Linear City and Cross-Brooklyn Expressway: Plan for Planning Report (N.Y.: N.Y.C. Planning Commission, 1967).

- f) "The expressway, with its component structures and equipment, must be not only functional and safe, but also satisfying to the eyes of both the traveler and the non-traveler."

2) Goals for Linear City (BLC)

- a) BLC is to function harmoniously with the surrounding communities of East Central Brooklyn, providing private and public services.
- b) The core element of BLC's contributing community facilities is to be an autonomous educational system for 18-20,000 students. This school is to have control over "curriculum development, programming and administration" and is to provide the full range of educational services from pre-school through high school, higher education, and adult education.
- c) "Linear City is to provide housing for all income levels."
- d) BLC will also provide employment opportunities.
- e) "In accordance with established city policy, the plan will provide for affirmative action to achieve racial integration."
- f) "All uses proposed for Linear City are to occupy appropriate spaces within the city as a whole, in lieu of developing free-standing single purpose structures. Because of the geometry of the site and the intensity of surrounding development, Linear City will be designed as a multilevel structure. The above concept assumes the

expressway as an integral part of Linear City, without thereby implying the subverting of its essential function as an Interstate Highway."

- g) "As in the case of the expressway, Linear City will be designed so as to minimize relocation."
- h) Technological innovations are to be fully exploited:
 - in the biological and psychological life systems
 - in public services
 - in communications
- i) BLC is to be from the outside a visual magnet and, from the inside, a delight to live in.

3) Goals for the design and development process

- a) The necessary design and development decisions are to be made "by broadly representative teams."
- b) "The community which BLC serves must organize itself to participate in the decision-making process..."
- c) "A significant portion of the investment in the expressway, and Linear City, is to be used to create local employment opportunities. The goal is not only to provide immediate work for the under-employed segment of the local labor force but, more significantly, to achieve an upgrading in the qualifications so that those involved will be capable of finding stable employment in comparable enterprises elsewhere after the completion of Linear City and the expressway."

Decision-making

Rogers designed a planning process making use of three separate teams, each having specific roles to play, while he labelled one of the teams the Decision-Making Team, the three teams together, in fact, were to constitute the decision-making machinery. Each of the three teams, the Design Team, the Decision-Making Team, and the Community Team, was to be in communication with both of the other two teams. (See figure XIV-2.) Basically, the Decision-Making Team was to be the client; it was to set a policy and direct the development work. The Design Team was to generate alternatives in accordance with the Decision-Making Team's policies. The Community Team was to provide the public an opportunity to make an input to the Design and to the Decision-Making Teams.

The Design Team was to be made up of professional staff and consultants in the fields of education, engineering, architecture, and urban planning. An urban design firm, in the role of prime consultant, was to provide coordination and leadership to the combination of consultants and in-house staff constituting this team. The team's own office space, to be located in Brooklyn, could become one of the first elements of the BLC facility and could therefore be used as a field laboratory by the team to work out some of its ideas. True to their goals, Rogers and Armstrong suggested that the idea of using the BLC development task as a training ground for local un- and under-employed labor should be put into effect from the start. The design team's staffing policies and the choice of a location for its offices were to be the first place to put the idea into effect.

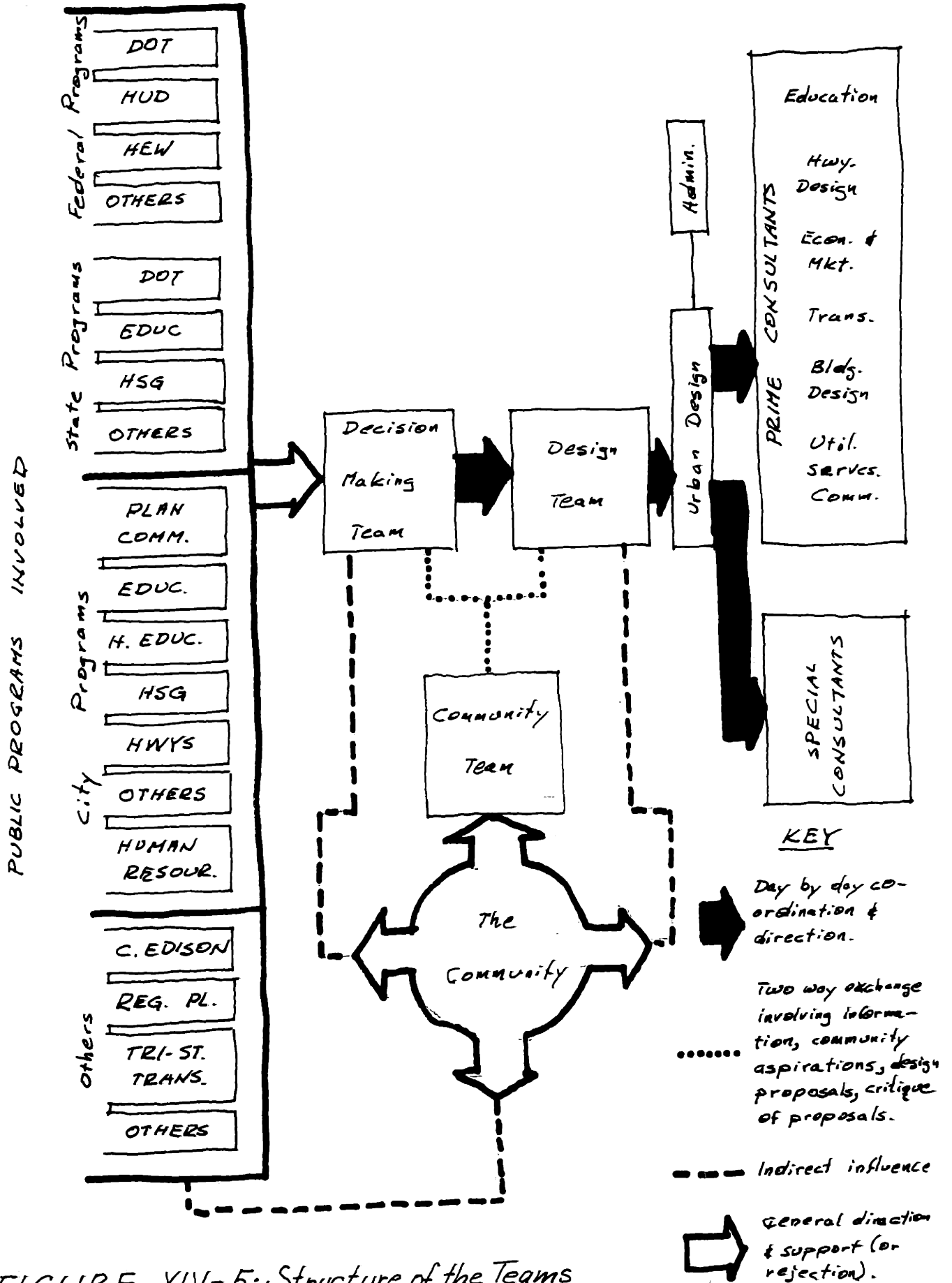


FIGURE XIV-5: Structure of the Teams

The Decision-Making Team was to consist of a non-profit development corporation which would be controlled by a Policy Committee representing the public agencies which would be directly involved in creating BLC - such as the School Board and the State Department of Transportation. A project director was to head the Decision-Making Team's staff and give day-to-day guidance to the Design Team. Federal, state, and city agencies involved only indirectly with the development of BLC were to serve an advisory function to the corporation rather than sit on its controlling committee. This team, obviously, was to combine into one voice all of the separate actors with substantial official powers¹⁰ to influence the outcome of BLC.

The Community Team was to represent the people in the area of BLC, the Brooklyn residents. Because both the BLC project and the community¹¹ were big, it was felt the public could best make an input to the project, and the other two teams could best communicate with the public, if the relationship between them were well structured.

XIV.D. Implementation

The city lost no time in putting the report's recommendations into effect. A policy committee, which itself was a product of the report,¹²

¹⁰There was no attempt to incorporate individual interests into the Decision-Making Team which might happen to have considerable powers to influence the outcome but which fail to represent a governmental agency or other recognized public body.

¹¹The Brooklyn communities of Flatbush - East Flatbush, East New York, Canarsie, Midwood - Flatlands, and Brownsville have a population of approximately 750,000.

¹²Recommendation #2.

met and approved the proposal to create the BLC Corporations which would then become the client in the subsequent planning and design tasks. The City Planning Office, under Don Elliott's direction, assumed the necessary administrative duties for the time being.

William Josephson who was initially retained by the City Planning Department became legal counsel to the BLC Corporation. Because of existing enabling legislation, he was able to create the BLC Corporation without requiring the participation of the state legislature at any point.¹³ Officials of the state's legal department immediately questioned the BLC Corporation's status, claiming it was not a creature of the state.

Simultaneously, work in creating the Community Team was initiated by the City Planning Department's Ed Robin, Deputy Director of the City Planning Commission, who took charge of the whole project. Contact with existing organized citizen groups, such as Democratic Clubs, Republican Clubs, the Model Cities Citizen's Council, etc., were made in an effort to begin informing the public of the nature of the emerging project. Early in 1968 David Bromheim was hired by the City Planning Department as Director of the Corporation. One of his first responsibilities was to clarify the contractual arrangements between the Corporation and the state.

Because State Education Commissioner Allen had, in the fall of 1967, given the Board of Education permission to build the disputed schools as part of BLC, there were funds available for the planning of

¹³It appears that this was an important consideration in the incorporation action.

the educational component.¹⁴ While the Plan for Planning report had listed a large number of potential financial sources, in early 1968, there appeared to be only four sources for planning funds. Besides the \$260,000 Title III money for educational planning, HUD made \$250,000, and the Ford Foundation \$100,000 available. The Highway Trust Fund was, of course, viewed as the prime source; it could provide, it was believed, up to \$4.8 million in planning funds. Besides the money which was available to design the expressway proper, the Highway Trust Fund paid for most - if not all - of the BLC planning because all of BLC was, essentially, a highway-connected project. The federal BPR had, in the meantime, begun to encourage state highway officials to use the Joint Development Concept for urban highway planning, and the BLC concept represented, in a sense, the Joint Development concept carried to its logical conclusion. All Highway Trust Fund money would, however, have to be channeled through the N.Y. State Department of Transportation because the Federal Highway Administration could only give funds to state highway agencies.

¹⁴The Board of Education obtained a \$259,328 planning grant under Title III, from the federal government's Elementary and Secondary Education Act, and assigned to the BLC Corporation. The Corporation agreed to plan not only the needed school buildings but to base plans for the necessary physical facilities on "a new approach to what and how children learn". The agreement also called for community participation in the planning. The School Board asked that particular attention be paid to the relationship between the educational activities and the other functions which BLC would eventually be housing.

"Linear City Education, Background and Some Preconceptions", a draft for discussion purposes written by BLC Education Staff.

In spite of the fact that the state's Department of Transportation was sure to be a key determinant in the success or failure of BLC, there had been a minimum of contact between them and the most active proponents of the BLC project. Like most state highway agencies, the N.Y. Department of Transportation had been viewing the federal government's recent broadening of the definition of "highway use" somewhat askance. The 1968 highway legislation's provisions for not only relocation payments but solatium of up to \$5,000 and the BPR's emphasis on Joint Development was seen, by many state highway officials, as the federal government's submission to blackmail; the federal government was willing, they felt, to have non-highway interests put their hands into the Highway Trust Fund till if that was what it took to get the interstate system built.

The Lindsay administration and the City Planning Commission were not totally ignorant of this kind of attitude on the part of the highway planners. Thus, the fact that the pre-planning in 1967 and the early planning in 1968 was being carried out without any effort to involve the highway decision-makers cannot be interpreted as an oversight on the part of Elliott's staff; it is more likely that the City Planning Department felt they could set a decision-making stage which would substantially dilute - if not eliminate - the Department of Transportation's decision-making powers. This, in fact, is how the BLC development plans that were evolving in 1968 were being interpreted in Albany.

1968 was a year for presidential elections; Governor Rockefeller and Mayor Lindsay both were being considered candidates for nomination by the Republican Party. This provided for a pervasive ingredient of competition in all dealings between the two men.

Lindsay's city administration and Rockefeller's state administration had each been planning a large Battery Park project; the two plans were on a collision course. These and other developments caused - and in turn were aggravated by - mounting friction between Rockefeller and Lindsay. It was thus in a highly politicized environment that the implementation of Rogers' Plan for Planning was begun.

When Commissioner Allen decided that building the needed public schools as part of BLC was acceptable to him, he stipulated that 5,000 students must be accommodated by September 1970 and the other 15,000 students by 1972.¹⁵ These deadlines meant that no time should be lost in getting the educational planning under way. Lindsay had reasons of his own to want to see early results; there had been that early - or rather premature - press release in February 1967 and, for the public, not much since. Local opposition to a Cross-Brooklyn Highway was building up. The Brownsville parents' demands for racial integration in the schools, which had been the catalyst for bringing about the BLC concept, were evaporating; the Brooklyn communities were fast becoming polarized along racial lines and integrated schooling no longer was seen as a panacea for solving racial problems.

To begin building the three teams by assembling staff for these teams in the City Planning Department may simply have been the most expedient way of initiating the Plan for Planning recommendations. That

¹⁵New York Times, November 13, 1967, 53:3 and August 29, 1967, 23:1

"Linear City and the Community", a discussion paper by Robert B. Speaks, Director of the Office of Community Participation, March 1969.

was not, however, how the highway planners saw it; they interpreted these actions as clear signs that the city planners were attempting to usurp the decision-making powers and responsibilities of the state highway planners. By summer 1968 the state's cooperation became absolutely necessary if the BLC Corporation was to become a more convincing reality. It became obvious that the highway agency's cooperation was not forthcoming, at least not on the city planners' terms. As a result, Bromheim resigned. Attorney George Zeidenstein agreed to replace Bromheim as chief executive of the BLC Corporation after he had been given to understand that the state would cooperate. He was faced by two problems immediately; the state had decided:

- 1) that Commissioner of Transportation Burch McMorran could not sit as a member of the Board of Directors of the BLC Corporation, and
- 2) that the state could not enter into any contractual agreements with the Corporation.

Since the state Department of Transportation would have lost much of its power for making highway decisions by becoming just one of nine votes on the Corporation's Board of Directors, they sidestepped this whole scheme by refusing to join the decision-making team. The official reason given by the Attorney General's office was that McMorran would experience a conflict of interests if he sat as a member of the decision-making team. Similarly, the Department of Transportation avoided the threat to its power posed by the Corporation's use of the Design Team. The Corporation had planned to have direct control over all design by contracting the engineering work out to the Department of Transportation and other con-

sultants. Since the highway planners were accustomed to being in the position where they farmed out consulting work, they sidestepped this trap by claiming legalistic reasons for not being able to enter into contracts with the BLC Corporation.¹⁶

The staff which had been assembled in the City Planning office in advance of the creation of the Corporation, was burdened in its work by an ever present sense of unreality. The employees themselves were not sure whether their employer, i.e. the BLC Corporation, was really about to be created - as they themselves were telling the public day-by-day - or whether this whole ambitious project was falling victim to bureaucratic and political infighting. The Community Team staff, headed by Robert Speaks, felt particularly hamstrung because they could never present the public with firm policies. The Corporation still had not held its first meeting; this left the staff operating in a vacuum. While the people in the community were met by a staff whose express function it was to communicate with them, they could not meet anyone who could give them any assurances or make any promises. With the Corporation's problems getting worse as 1968 wore on, the public began to tire of meetings with public officials who appeared to have no official standing. The Community Team staff saw whatever credibility it had evaporate as the Corporation failed to materialize.

¹⁶Early meetings between lower level legal officers in the Attorney General's office and Zeidenstein had removed, or so it seemed, all obstacles which might have interfered with having the State Department of Transportation cooperate fully with the BLC Corporation. In fact, the staff people from the state who had worked with the Corporation staff were somewhat embarrassed to have to produce a rationale to justify the policy decision later made by the Governor of not supporting the BLC Corporation.

In late 1968 Zeidenstein and Elliott's office fell back on a different scheme in a last effort to save BLC. They argued that, while the state might not be able to enter into a contract with the BLC Corporation, there certainly was no reason why the state could not enter into a contract with the city. The Lindsay administration asked that the state agree to execute a contract with the city which would let the city have 10% of the highway funds to perform the Joint Development planning in conjunction with the state's Cross-Brooklyn Expressway. The city would, in turn, deal with the BLC Corporation and could thus still follow - as much as possible - the Plan for Planning outline to create BLC. This arrangement left the state Department of Transportation in a much stronger position than Rogers' report had envisioned; after all, it was now acknowledged that there were not some nine equally powerful actors but essentially just two - the state Department of Transportation and the city. Even with only these two actors on the scene, the state obviously held the dominant role since it controlled the prime funds. In fact, this power was eventually exercised by the state to kill the BLC project.

The state cooperated with the city and signed the contract amid fanfare in January 1969; Federal Highway Administrator Bridwell, while not a party to the contract, gave his approval to the contract.

There was, however, an unpublicized side agreement which was executed along with the publicized contract. While federal regulations permitted the expenditure of highway funds for a wide variety of uses - such as Joint Development - New York state law still prohibited the spending of highway money for anything which was not in the most direct sense of the term a highway expense. Before the contract, executed in January

1969 between state and city, could have any meaning, state legislation regulating the spending of highway funds had to be liberalized. Because Rogers' Plan for Planning had also proposed extending BLC farther north than the Corde Corporation had originally suggested by also building a Queens-Interborough extension to the expressway, state legislation adopting this expressway extension was also needed. The "secret" codicil attached to the contract made the following provision:

- 1) The contract just executed was null and void until state legislation was adopted which:
 - a) made it possible to use 10% of the highway money for Joint Development,
 - b) adopted the Queens-Interborough extension.
- 2) Governor Rockefeller would introduce both pieces of legislation.

And that is precisely what Rockefeller did. He introduced both bills in the state legislature, and when they failed to pass he shrugged his shoulders.

It was not until this happened, in February 1969, that the City Planning officials realized that they had been outmaneuvered by the state. The staff which had been hired for the BLC Corporation was disbanded, and the HUD planning grant was returned to the federal government. The director, George Zeidenstein, went to the Ford Foundation. The City Planning Department kept most of the lower echelon staff. And, the fantastically, promising, optimistic, imaginative concept of cooperation between public agencies - for the benefit of the public - met its end.

Index of Abbreviations in Chapter XIV

BLC = Brooklyn Linear City

BPR = Bureau of Public Roads

HUD = (U.S. Department of) Housing and Urban Development

RTKL = Rogers, Taliaferro, Kostritsky, and Lamb

APPENDIX B:

COMMUNITY INTERACTION TECHNIQUE CATALOGUE

- A: TECHNIQUES WHICH LEND THEMSELVES FOR USE THROUGHOUT THE LOCATION-DESIGN PROCESS
- B: TECHNIQUES WHICH LEND THEMSELVES FOR USE IN ONE PHASE OR ANOTHER OF THE LOCATION DESIGN PROCESS
- C: TECHNIQUES WHICH LEND THEMSELVES FOR ACHIEVEMENT OF SOME SPECIFIC PURPOSES

The community interaction techniques described in Chapter IX are expanded here in this catalogue in order that the highway agency which considers using some of them has something more than the bare concept to go on. Much of the work of operationalizing these techniques and, in fact, applying some of them in the field in cooperation with the California Division has been - and at this date (summer '71) continues to be - done by the author's colleague, Robert Giel. Elizabeth Bennett also has been contributing to this effort, and Annemarie Bleiker has expanded the concept of CIT #13, field work, so it can be carried out by highway location team staff members.

Index of Community Interaction Technique Catalogue

- A: Techniques which lend themselves for use throughout the location-design process
1. Establishing an Overall Process Agenda and Operating Within It
 2. Educating the Public about the Decision-Making Process
 3. Monitoring New Developments Affecting One or More of the Relevant Urban Systems
 4. Monitoring Actual Impacts of Recently-Built Highways
 5. Ombudsman
 6. Encouraging Internal Communication
 7. Establishing and Maintaining Contact with All Actors and Issues
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 - 12A: Working Meetings
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16. Operating a Field Office
 17. Analyzing Past and Current Plans Made by or for a Particular Community
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 29. Providing the Community With the Capability to Deal with Relevant Non-Highway Problems
 30. Carrying out a Demonstration Project
 31. Conducting an Experiment
 32. Charrette
 33. Employing Community Residents on the Project
 34. Previewing as a Check on Communication Effectiveness

35. Brain-storming
36. Looking for Analogies
37. Cataloguing Design Concepts
38. Designing "Extreme" or "Ideal" Solutions
39. Parallel Search

Technique #1

Establishing an Overall Process Agenda and Operating Within It

Key Feature:

The location team has a specific procedure for studying location-design alternatives and it usually also has in mind a time table for route studies, design, and construction for each project.

The location team clearly communicates this agenda as well as any applicable parameters for time and cost variables to everyone it can, at every opportunity. Formal handouts, the mass media, informational meetings, and personal contacts can be used. The public always should not only know what phase of planning the agency is in, it should also know how that phase fits into the overall decision-making process. Obviously, the highway agency is not at liberty to change the agenda unilaterally or to tamper with it in any way without the public's full understanding and (implicit) consent.

Basic Principle:

The location team's objective of achieving general public agreement on a course of action can be frustrated in one of two ways: 1) the various interests may fail to reach agreement on one design option, i.e., they may fail to make a choice among the alternative courses of action, or 2) the various interests may fail to agree on the process by which the choice among alternatives is made.

CIT #1 focuses on this latter potential problem by making sure that the affected interests generally agree that there is nothing

inherent in the location/design process being used which will preclude reaching consensus on an alternative, once alternative courses of action have been developed and augmented.

The location team keeps the public informed about:

- what has already occurred, and why,
- what the agency is now doing,
- why it is doing it, and
- what the anticipated sequence of future events is

in a manner so that local public officials as well as the man on the street understand what is happening.

Variations:

1. The depth of public knowledge has to be traded off against the publicizing costs. At a minimum, the local officials and the people directly affected must know what the location team is doing, and any other lay actor must be able to find out without great effort.
2. The time table or agenda should be adjusted to community needs, e.g. local development plans. Ideally, the community understands how the time table is developed so then this adjustment can be made jointly to community officials and community residents.

Example:

A highway agency's district office prepared an agenda for each route planning and design project. They present this time table at small meetings to the local officials as a means of introducing them to the process; they also adapt the agenda to

the particular needs of that city. A public information handout is prepared and revised every six months for each project. This informs the reader of what is happening, what has happened, what will happen next. The area affected by the study is mapped; these maps are distributed at all public information meetings and are available to anyone who wants information.

The same office has a permanent graphic display on the walls of one of its offices, depicting the entire highway decision-making process, and the location-design process' place within that larger process. Lay actors are brought to this easy-to-understand display to see what the current phase of the location-design is and how it fits into an over-all agenda.

Advantages:

- As the agency operates within a well-known agenda, the public comes to anticipate the various phases of the location-design process.
- When the public knows what happens next, it can make its input at the appropriate times. This spares frustration on all sides.
- Many people feel the team has a particular solution in mind before it undertakes the study; when this is the case, the public ought to know; when it is not the case, only a fully shared understanding of what the process of doing the study is really like can dispel the public's cynicism.

Disadvantages:

- The team does not have the kind of latitude and flexibility in changing the agenda that it has if the public is relatively

ignorant of it.

- The agency must be careful not to oversimplify its presentation of the process in its efforts of setting up an agenda which is understood by everyone to the point where it offends the public.

Highway Uses:

This technique lends itself to use by the location team through all four phases¹ of the highway location-design process.

¹The four phases that are made reference to are:

1. initial survey
2. issue analysis
3. design and negotiation
4. ratification and monitoring

See Marvin Manheim et al; Community Values in Highway Location and Design: A Procedural Guide, (Cambridge, Mass.: M.I.T. Urban Systems Laboratory Report No. 71-4, 1971), Chapter VIII.

Technique #2

Educating the Public About the Decision-Making Process

Key Features:

This constitutes an explicit effort by the highway agency to show the public how the agency goes about doing its work. The engineering studies should not be perceived as black boxes but a rational process which can be understood by the lay actors.

The history of the decision-making process of the highway in question and the study tasks, i.e. the location team activities, should be reviewed repeatedly, in a manner that makes them understandable to the layman. It should be reviewed for the public's benefit before every major event, such as a public hearing.

- To see that as many people as possible obtain this information, the agency should use several different communication channels.
- Since people's values change over time, the agency should be prepared to change the decision-making process when necessary to conform to the value changes.

Basic Principle:

Two assumptions are implicit in the technique:

1. Unless the various participants in highway decision-making share the same definition of the respective rights, responsibilities, and role of the location team, and the

various affected interests - the local governments, the State legislature, the relevant federal agencies, the private groups and interests, and the various other institutions - we must expect controversy and even deadlock over the process of making location-design decisions.

2. Unless all interested parties have a good understanding of the process, no one can know whether a general agreement on these rights, responsibilities and roles exist.

Presumably the location-design process is legitimate and deserves public support, and the lack of support is to a considerable degree due to the fact that the public does not realize the process' fairness, and actual adequacy.

Variations:

- A special section can be set up in the highway agency to accomplish this task. This is probably necessary for an effective on-going public education effort.
- On the surface, it may appear that the location team has the option of educating local officials or the public at large about the location/design process. However, it must be kept in mind that not all interest groups may be represented by local officials; these groups are likely to feel that they have been bypassed by the agency. It is essential

to undertake the larger effort of educating the general public of the agency's processes.

Advantages:

It reduces controversies to the real ones by getting rid of those controversies due to misunderstandings about the workings of the highway agency and the content of the location-design process.

It facilitates communication between the agency and the public.

Disadvantages:

Once the public knows how the process operates, it will volunteer its opinion about the appropriateness, adequacy, and efficiency of the location team activities. This ought not be called a disadvantage really.

Highway Applications:

This is an activity which ought to be carried out at some responsible level by a location team at all times. The activities ought to be intensified if it is judged that the public has the wrong idea about the process or is generally ignorant about it.

Technique #3

Monitoring New Developments Affecting One or More of the Relevant Urban Systems.

Key Features:

Some professional(s) within the highway agency (it may not be feasible, or even desirable, to carry out this technique within each location team) keeps abreast of developments in each of the several urban systems - transportation, housing, finance, labor, poverty, etc. - which affects or is affected by the highway (directly or indirectly). Thus the highway agency is aware of the changes which are taking place and are being anticipated in these systems, and the agency can, because it anticipates these changes, take steps to fit the location-design process as well as the alternatives it generates to the new conditions.

Basic Principle:

Highways are part of a transportation system; rapid transit and other forms of public transportation are another part of that system. Besides other parts of the transportation system, highways also affect - and sometimes are affected by - other urban systems, such as the housing market, the mortgage market, and the economy as it relates to local employment, local industry, and local business. When one of these systems undergoes change,

or can be anticipated to undergo change - e.g., the effects of a change in the mortgage market on the general availability of housing - it is desirable that this fact is brought to bear on all relevant decisions. Most of these anticipated changes should affect agency-wide policy.

Example:

One highway agency, many years after a highway had been adopted and designed, got around to building it. A relocation program had been worked out, and there was no real controversy about any aspect of the highway. Now, at the point when the properties were finally being taken, it turned out the mortgage market was extremely tight. One administrator in the agency realized that many people who had anticipated no problems with moving might very well find it extremely difficult - if not impossible - to find banks willing to mortgage at interest rates that were anywhere near the rates they had before. Consequently, he saw to it that the necessary legislation was drawn up and enacted which provided a subsidy of the unusually high mortgage rates of people who found themselves selling and buying houses involuntarily.

Advantages:

- This is an easy way to identify and avert future problems.
- This is a way of finding potential solutions to problems caused by the highway.

Disadvantages:

In the short run, it will be hard to prove a substantial payoff for the effort required.

- When the technique works, the agency is not solving problems; it is avoiding them.
- To the agency which is set on doing its work the same, year in, year out, this technique amounts to "looking for trouble".
- The effects of such monitoring are usually long range improvements.

Highway Applications:

This technique can be used by the highway agency at all times. It should not be confined to the route location process. It may best be executed by a high level staff element explicitly charged with preparing a series of "Current Issues" reports; it ought to affect agency-wide policy.

Technique #4

Monitoring Actual Impacts of Recently-Built Highways

Basic Principle:

Predicting a highway's impacts on the individuals' and the community's cultural values is a tall order; the location team has few if any tried and true methods available.

This technique wants to make the most of the fact that, by the time a highway alignment and design has been agreed on by the various interests, the location team has learned a lot about the affected interests' values. If it is not only predicted what kind of impacts the highway might have, but, if after the road has been built, the contact with many of the interests is maintained to find out what impacts the road really did have, then the team's ability to predict can be expected to improve over time.

The highway agency continues to observe the effects of highways after they are built. The predictions made during location and design are tested and the unanticipated results are studied by checking and modifying predictions over time. The accuracy of impact prediction is improved.

Key Features:

The highway agency makes its predictions of the anticipated highway impacts as operational as is feasible. It then makes

provisions to measure the actual impacts once the highway is being built. This allows the agency to improve its capabilities - over time - to make good impact predictions, and it dispels any unfounded suspicions on the public's part that the agency does not really care to know what the actual impacts are.

The highway agency can actually use a number of community interaction techniques to follow up the prediction of impacts. Among the most promising are:

- Monitoring the mass media
- Maintaining contact with community spokesmen
- Mapping political, social, and economic data for several years after the facility is built
- Analyzing plans made after the facility is announced and after it is built

While it may be the easiest if the agency has a special section to monitor all past projects rather than letting each location team monitor their own projects, a good part of the learning to make better predictions by a location team may be lost unless there are also provisions made which have the team reconcile its predicted impacts with the actually observed impacts.

Variations:

1. The agency may find it best to hire a disinterested outside consultant to do the follow-up in order to get as neutral a report as possible.

2. The agency may decide to monitor only controversial projects, i.e. projects where there is a real dispute about what the impacts really will be.

Examples:

For an urban renewal project in Boston's West End, the National Institute of Mental Health conducted several extensive follow-up studies. Economic, social, and psychological effects were among those examined. The follow-up team studied some residents still in the area but they concentrated their studies on those who were displaced.

While follow-up studies for highways rarely are this extensive, the agency can learn as much by doing studies of several projects.

The highway agency, of course, would have learned most from this follow-up study if: 1) it had made relevant predictions of the highway's economic, social, and psychological impacts, and 2) if it had participated in the design of the follow-up study.

Other Advantages:

- This technique is sure to sharpen the highway agency's perception of likely impacts.
- This technique serves to stimulate more exact and candid impact prediction techniques.

Disadvantages:

- It is often difficult to separate the effects of the highway from effects of other, not necessarily related, activities.

Highway Uses:

This is not an activity which each location team ought to carry out unilaterally, but an activity for the whole highway agency to be involved in.

Specific predictions which lend themselves to the application of this technique are:

- traffic projections
- accident prediction
- noise level prediction
- air pollution level prediction
- predictions of families, jobs, businesses displaced
- predictions of relocation hardships (incidence and types)
- effects on tax base,
- etc.

Somewhat more difficult, but not impossible, are the monitoring of predicted impacts which are harder to quantify; still harder to get a handle on are secondary effects.

Technique #5

Ombudsman

Key Features:

The ombudsman is an independent, disinterested investigative officer, operating inside the agency but being charged with the responsibility of protecting the man on the street from bureaucratic abuse by the agency. Lay actors can contact him when they feel that the agency is being or has been unfair. He then sees to it that, if a wrong was done, it is corrected. If he finds that there are constraints imposed on the agency which prevent it from being fair to the lay actors, these constraints are brought to everyone's attention so they can be changed.

Basic Principle:

It has to be expected that the location team and the highway agency - just like any large bureaucracy - will from time to time have complaints lodged against them by some affected interest even if they try to be responsive and responsible. Where can the aggrieved lodge his complaint? Unless there is an ombudsman - or some other mechanism which fulfills the same function - he has only three options: 1) appeal to the highway agency itself, i.e., to the agency against whom the complaint is lodged; 2) appeal to the state and/or federal government to intercede; 3) take the matter to court. All of these are unsatisfactory because they make mostly for a lot of conflict and controversy rather than making for the correction of any possible wrong.

The ombudsman, as he is known in Scandinavian government, is there to investigate complaints by individuals or groups. In recognition of the fact that it is very difficult for an individual or a group to address a bureaucracy, he is made accessible to all. He has no executive powers but tries to right a wrong rather than to fix blame. If he does perceive systematic wrong-doing, he may expose the matter in the public press.

Variations:

There are many variations to this technique. The ombudsman may have little or a lot of power to prosecute those bureaucrats who abuse their powers. He may be an agent of the administration rather than legislature; he may be self-appointed (e.g. newspaper columnists), or he may be elected. The ombudsman may be restricted from entering various types of cases and his jurisdiction may be limited to a specific level of government. For example, a state agency might not be subject to a county ombudsman.

Example:

The highest state transportation official may appoint an ombudsman to serve on his staff. He would give him the responsibility to work out all conflicts by working as a go-between for the agency and aggrieved lay actors and to bring shortcomings that are inherent in the decision-making process to the attention of the administration, so the short-comings can be addressed.

Several Scandinavian countries have the institution of an

ombudsman written into their constitutions, and Hawaii has recently appointed one for the State.

Advantages:

- Having an ombudsman provides the public with a specific person to turn to with its complaints about bureaucratic dealings.
- If the ombudsman is effective, his existence eases community fears of a public agency acting unfairly. Local residents feel that, should the agency not live up to its word, the ombudsman can help them correct this.
- The ombudsman begins to humanize the inherently impersonal bureaucracy, and he gives the agency the capability to find its own shortcomings - so they can be corrected - before they grow to the level of confrontations and scandals.

Disadvantages:

It is difficult to create an office of ombudsman which is at the same time effective but does not itself become a seat of bureaucratic power.

Highway Applications:

The location team, or the highway agency, can implement the concept without necessarily creating an office of ombudsman. One way to do this is for professionals to be aware of their agency's shortcomings and to make a very special effort to help lay actors in their dealings with the agency, to make their contacts as personal as possible. The professionals also can

speaking up about the policies and constraints that they are aware of as being inherently unfair. To make all this happen, the highway administrator has to reward the ombudsman-behavior of professionals, and certainly make sure that the opposite does not happen.

Selected References:

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Scott, Stanley, Western American Assembly on the Ombudsman, Berkeley, Institute of Governmental Studies, University of California, 1968.

Technique #6

Encouraging Internal Communication

Basic Principle:

Good, creative ideas about a problem do not come only to the personnel directly involved in its solution, i.e. to professionals; in fact, people who are a little removed from the problem may have an advantageous perspective. In order to put to use good ideas from within the highway agency which happen to surface at the wrong place, good communication within the agency has to be encouraged.

Key Features:

For effective communication both parties have to be willing to communicate; each must feel that he gets something out of it. The person with an idea originally may feel that he can't get credit for it if he tells someone else, or that the person receiving communications about proposed changes may feel criticized. To overcome these problems an incentive structure is necessary; its form depends on the management style of those near the top of the bureaucratic hierarchy.

- a. A mechanism that might be used by the agency management to facilitate increased cross-hierarchy communication is the informal friendship and acquaintance network. Communication between those who share car pools, have coffee together, or lunch in a group, i.e. those who see each other in non-work

- roles, can create the right atmosphere for this.
- b. Effective listening means hearing what the other person is trying to communicate, which is not necessarily the same as what one would like to hear. A way to check this is for the listener to repeat the statement to the speaker in the listener's own words, until the speaker is satisfied that his audience understands.
 - c. Concise verbal or written statements tend to be more effective than lengthy monologues. Short communications spare others from listening to a lot of words and force the speaker or writer to organize his thoughts. Limits on the length of internal memos might be used to improve communication.
 - d. One of the largest barriers to communication is the defensiveness of the listener. To avoid this pitfall an effective speaker does not criticize the listener. He presents his ideas in a way which lets the listener come to his own conclusions.

Variations:

Organizational rotation policies may be used to insure that each person knows, through experience, the problems and points of view of other departments within the agency. Such policies are also likely to increase the range of informal communications.

Sensitivity training can also be used to encourage internal communication.

Formal internal communications can be improved by using Technique #28 (Previewing Communications as an Effectiveness Test).

Example:

The man working in the field office of one freeway project spent a lot of time in private meetings with local residents. Although it was really beyond his responsibility - and authority - he recommended the agency adopt a policy of hiring local people to help with the relocation and replacement housing programs. His idea was ignored by his immediate superiors. His idea was picked up, however, at headquarters, where arrangements were made to have it implemented. Had this idea not reached headquarters, the agency would have been the poorer for it, and the engineer would have been discouraged from communicating ideas to his superiors in the future; he would have been frustrated.

Advantages:

- Good ideas are a resource. Internal communications aim to make the most of that resource.
- Good internal communications will allow the agency to develop more consistent policies.
- A broader view of the agency is created through communication. There is less chance that parochial views of departments will become powerful.
- To share information the people within the agency must crystalize their own thoughts and opinions. They will think more clearly,

and this will make communications with the community easier.

- Communication is good for morale - a man with an idea knows it will get a chance.

Disadvantages:

- When people listen and communicate they expose themselves to being changed, and some people dislike or fear change.

Highway Applications:

Internal communication is important at all times in the highway planning, design, and construction process. It is especially important that everyone within the highway agency understand the internal range of philosophies toward highway building before studies begin. Ideally everyone in a location or design team shares a "public servant" frame of mind.

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- Schein, E. H., Process Consultation: Its Role in Organization Development, Reading, Mass.: Addison-Wesley, 1969, pp. 15-30.

Technique #7

Establishing and Maintaining Contact with all Actors and Issues

Key Features:

The location team makes a list of all interests, then keeps a record of its communications with each of them. One form of this record is a calendar-like chart, showing such information as who initiated the contact, when the contact occurred, what happened, etc. In this way, the location team can quickly see who has and who has not been contacted recently.

To contact formal organizations, relatively formal contacts may be appropriate - e.g. corresponding in writing - while contact with informal groups might best be made by personal contact. The team should consciously create channels of communication - e.g. personal contacts - which can then serve to channel information and to get feedback. Exactly how contact is maintained is determined by the particular context.

Interested actors come to other meetings while those who just want to be kept informed of the progress of the process may be happy to be kept informed by mail.

To contact individuals not associated with groups, the agency needs to use public meetings, public displays, field office, the mass media, or public mailings.

Basic Principle:

This technique aims to open two-way channels of communication between the location team and each of the various individuals,

groups, and institutions that may be affected by the highway, and it attempts to keep these channels open once they have been established.

Variations:

Some location teams choose to initiate contact only with local officials and the spokesmen of governmental agencies and "friendly" organizations, such as chambers of commerce. Such a team has to rely on these contacts to pass the information along. This presumes that the local leaders can, and will, distribute undistorted information and will reach all individuals, an assumption which is rarely well founded.

When the location team deals only with local officials it should be prepared for the consequences. Sometimes, when a particular group has not been in contact with the location team, and at a late point in the process the group begins to communicate its concerns, it is too late to incorporate the subject of the group's concern in the study.

Other Advantages:

- By going directly to the impacted interests, the location team has a better chance to understand the needs, wants, and the opinions of the diverse interests that make up the community.
- If contact is regular and current, the local people also have a better chance to understand the highway agency, the decision-making process, and the alternatives that are feasible.

- By communicating and discovering diverse viewpoints, the location team exposes itself to the possibility that it will change its views of the range of feasible alternatives, the process, and the agency's role in it.

Disadvantages:

There are no inherent disadvantages.

Highway Uses:

This technique is used throughout, and even after, the location-design process. The agency communicates with those interests which appear most relevant at a given phase of the location-design process, but besides this, it keeps the channels of communication with the others open at the same time. The responsibility for this technique rests with the location team. It must remember that some interests are unable to maintain participation over any extended period of time. Contact with these people should be at a level that does not "wear them out."

Technique #8

Monitoring the Mass Media

Key Features:

There are bound to be a number of information media in any community: newspapers, newsletters, local bulletin boards, radio stations, and television channels are the most common. The method used to monitor each of these will vary with their relative importance in the community and with the team's needs. A few examples follow; these should be adapted to fit the case at hand.

Newspapers and newsletters:

It is often convenient to establish files of newspaper clippings which may be filed by topic, labelled by date and source, and cross-referenced as necessary. The extent to which this is done depends on the team's needs. Most public libraries save copies of major papers on microfilm; the team may wish to save intact copies of other papers and newsletters, cross-referencing relevant articles.

Monitoring newspapers is best done by members of the location team. Clipping services may be available, but often the clipper overlooks relevant articles or does not recognize issues which may affect the location process. Furthermore, if a clipping service is relied upon, information may be too slow in getting back to the location team to be of maximum usefulness.

Articles on major public and private projects are, of course, important. But it is also useful to read the activities and society pages and the advertisements to get a feel for the structure of the community.

Radio and Television:

The team should monitor talk shows, news broadcasts; they present an opportunity for the location team to gather information about the community and to establish two-way communication. Monitoring the mass media allows the team to "listen in" on many community conversations. Careful monitoring and analysis allows the team to learn about community interests, conflicts, and values; it provides information on how the agency is viewed by certain community groups; and it indicates when the agency should enter into certain on-going discussions. To communicate effectively, the location team must understand the concerns of local residents. This technique addresses the team's basic problem of listening effectively.

Variations:

- In many areas, local bulletin boards are an important communication agent. Periodic checks of these boards may yield useful information.
- Some radio and television stations make typed copies of editorials, speeches, and specials available to the public.

Example:

In some state highway departments each project engineer reads the local daily and weekly papers. He clips the most important articles, but reads the whole paper to better understand the community. (Most of the articles clipped are not directly highway related.) Before clipping the articles, some engineers pass the papers among their squads to allow the entire staff to become familiar with some of the needs and values of the community.

Advantages:

- Monitoring the media is a non-reactive way to learn about the community.
- The agency may learn how it is seen by the community and may discover ways it can use the media to communicate better.

Disadvantages:

- Reporters rarely get a story completely straight. All one can hope for is that their errors are random events, that they are not systematic errors. When their errors are systematic, the media reports are misleading.

Highway Applications:

This is used at all times during the location process by the location team. It is also used by the highway agency, less intensively, after a route has been constructed or before route studies begin.

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Holt, Rinehard and Winston, 1960.

Technique #9

Producing and Releasing Material for the Mass Media

Key Features:

This technique involves communication between the highway agency and the general public. To do this efficiently, the agency should:

- a) put the information in its proper context, make the meaning of the announcement clear by giving background information with it.
- b) be concise; send a few well presented messages rather than sending a number of messages at once; (it is safe to assume that the reader or listener has a short span of attention). Make sure that the messages are clear, do not saturate the public with messages.
- c) clearly distinguish fact from opinion; while opinion, or a way of looking at facts, can and should be communicated, the agency must be careful not to label these as facts. If highway agency facts are to be believed by the public, they must not be confused with agency opinions.

Basic Principle:

The agency produces material for the mass media so that it does not have to be entirely dependent on the initiative of reporters to present its message. It is the agency's responsibility to make sure that agency information is brought

to the public's attention.

Variations:

For Factual Information

1. Legal Notices - usually not enough when publicizing events
2. Paid Advertisements - usually only for special events
3. Formal News Releases - such as photo and press releases
4. Store Front Displays and Notices - usually models or renderings displayed in prominent places
5. Mail Notices and Hand Fliers - often effective for a specific project but usually too costly for general publicity
6. Documentary Movies, Television and Slide Shows - suitable for providing educational information; also can be used for special events
7. Sound Trucks - to announce special events

For Factual Information and Opinions

1. Informal News Coverage - initiated by media; the agency can encourage this by establishing contacts within the media's news teams and by notifying newsmen of events the coverage of which is of interest to the community.
2. Regularly Written Columns for the Newspaper or Magazines
3. Feature Articles - written by a journalist or by a member of the agency staff (with appropriate bylines)

4. Documentaries for Television and Radio

Feature articles often occur during controversies. At these times, the agency should do all it can to insure that the article is factual. All the facts should be presented accurately; whether a fact supports or undermines the agency's project must not enter the decision of making it public.

For Opinion

1. Appearing on radio or television to participate on panel discussions, to debate or editorialize
2. Writing letters to the editor

Advantages:

- a) The public is more willing to believe the highway agency if it feels that the agency has an open mind and presents all sides of an issue.
- b) Informed people are less willing to believe rumors; in fact, they do not have to rely on rumors for their information.

Disadvantages:

- a) The agency's public news dissemination must be consistent with the agency's actions. Otherwise people cannot be expected to believe the news releases for very long.
- b) Public statements can be used against the highway agency; they therefore must be such that the agency has no qualms of standing behind them.

- c) The technique might be used as "public relations" by the agency. This is dangerous. If only favorable information is presented, the public soon views this as propaganda and receives it with cynicism.

Highway Applications:

Many of the variations might be used by the highway agency before, during, and after the location process. Some could be continuing functions of the highway agency. Others, notably the first four variations, are most appropriate when initiating studies and announcing meetings, hearings, decisions, and other events connected with the location. All, or most, of the variations probably should be made use of when the community is about to make a major decision - e.g. to endorse or to reject a particular alignment proposal - and needs to be fully informed on many issues.

Technique #10

Dealing with the Public in the Highway Agency Offices

Key Features:

The highway agency which endeavors to be as responsive and responsible to the public as is feasible, should consider policies like - or comparable to - the following:

- 1) Always respond promptly to any inquiry:
 - within a week for letters,
 - for telephone inquiries, find the person who can best help the caller immediately or, if that is not possible, have that person return the questioner's call within 24 hours,
 - those who walk into the location team offices should be dealt with by an information officer who is talented in meeting the public and is trained to talk about the location-design process. He not only answers the individual's inquiry but also puts it into the context of the overall location-design process. The information officer does not spend full-time in this capacity; rather, it is a job which is performed by one of the regular location team members who is placed high enough in the agency's hierarchy to have a good overview over the process.
- 2) Be helpful and cordial to any inquirer.
- 3) Use complete candor. Do not mislead an inquirer. Tell him when you cannot answer his question and tell him why.

- 4) Do not expect that a private citizen necessarily knows what to ask for; he may know what he wants but not know its name. Do not swamp him with information, but give him as much information as he finds useful.
- 5) When giving out information, put it into context. Give the history and present status of projects.

Basic Principle:

Individuals groups, institutions, even other governments, try to make contact with, or try to get information from, the location team. Some of these efforts are made by phone, some in writing, and some people try to achieve their purpose by visiting a highway agency office. More often than not, the right contact is made only after some delay; in some cases, the right connection is never made.

This technique attempts to establish procedures and mechanisms to facilitate getting inquiries taken care of without frustrating the person making the inquiry, without delay or the expenditure of undue effort by the location team. The technique also recognizes the importance of having the location team learn about the community's problems and needs.

Variations:

A centralized information office which handles all community contact is one possibility; another is to have a good directory at the entrance to the agency offices and to let inquirers find the man working on their problem. The danger of the first

alternative is that individual inquiries may be slow in reaching those actually responsible for the project; the public may feel that they are being kept at a distance from the personnel who could help them, that the information office constitutes an intentional bottleneck. The second approach, on the other hand, may scare away individuals who cannot determine to whom their inquiries should be made or who are uneasy about approaching upper echelon staff members with their problems.

Advantages:

- The public gets the best information available.
- The location team can get a feel for the mood of the public, and the man on the street gets some idea of the people who are part of the location team.

Disadvantages:

- Much intra-agency communication is a necessity to avoid giving out misinformation. Without good internal communication, the information system may cause more ill will than it prevents.

Example:

In some states, the highway agency has a public information office on the first floor of the downtown office. When a layman walks in, he is directed to that office. The office is staffed with engineers who have copies of the latest geometrics and specifications, and acquisition schedules. They answer questions and give out leaflets or miniature maps which describe the project. If they cannot answer the questions, they take the person to the

design or route planning section where a designer who is working on the project answers the questions. All telephone inquiries about a particular project are given the same routing as the direct inquiries.

Highway Applications:

This technique is used as long as there is a highway agency office.

Technique #11

Listening to the Public for Suggestions of Alternative Solutions

Key Features:

To listen, the location team uses other techniques like:

- monitoring the mass media,
 - holding and attending meetings,
 - surveys,
 - monitoring response to the public information displays,
 - dealing with the public in the agency's office,
- and - operating a field office.

For every suggestion, the location team keeps a record, perhaps an index card.

The location team then makes sure that it can account for each suggestion, what it found in it, what it did with it, etc. It should examine each one, showing which ones are not worth pursuing - and why they aren't - and which ones are worth pursuing. The team thus is able to justify any decisions not to study a suggestion any further.

Basic Principle:

This technique is based on the recognition that some of the ideas which get kicked around by the various affected interests may hold the key to finding solutions to some of the highway problems. Good ideas may be difficult to spot because they often are buried among some entirely infeasible suggestions,

or they may come from some group which has antagonized members of the location team, or they may be put forth too early or too late in the process. Unless the location team makes a conscious effort to capture every useful suggestion out of all the comments which surface at one time or another, many ideas which could contribute to the development of successful solutions are lost to the location team.

Example:

In Boston in 1953, residents of a close-knit ethnic community (Chinatown) were faced with highway proposals which called for the demolition of up to 50% of their neighborhood. They developed an alignment alternative of their own; the plan's chief feature was a complete separation of the north-bound and the south-bound lanes. This, they argued, could be accommodated with minimal disruption. However, the idea of split alignments in an urban context was relatively new and untried, and there is no evidence that the plan received any serious consideration by the highway agency.

Other Advantages:

- The highway professional begins to understand that a good solution is one that is acceptable to the local residents, not one that is "technically best." Everything else being equal, ideas suggested by local residents are more acceptable to the community than those of the highway agency.

Disadvantages:

There are no disadvantages to this technique.

Highway Applications:

This technique is useful to the location team throughout the highway location-design process and is especially important during the first three phases.

Technique #12

Holding and Attending Meetings, Public Hearings

Technique #12A

Working Meetings

Key Features:

Interested parties or their representatives come together to discuss an issue. If the group is expected to do some work, it should have no more than twelve participants. The group should meet with the clear intent to resolve - or to try to resolve - specific points. For this reason all participants should be aware of the agenda of items to be discussed, whether that agenda is established orally or in writing.

Whether one of the participants actually runs the meeting or whether the group works more spontaneously, without a chairman, it is important that the participants realize it when the conversation strays too far afield. Some participant then has to steer the group back to its main business. Ideally this task is not always performed by the same person but is taken at one time or another by every participant. The order in which the agenda items are discussed may or may not be significant. If it materially prejudices the likelihood of resolving the issues in question and therefore is significant, someone will have to take it upon himself to see that the agenda is followed.

When the group runs into views or goals of some of its participants which are so incompatible that it threatens the group's work, they have to search for, and then focus attention on, those areas where the participants in question have something in common, where they agree. An effort is then made to expand these areas of overlapping purposes by looking for ways to build on the originally shared views.

The group is better off if it does not follow formalized procedures, such as Robert's Rules, because they tend to interfere with the flow of ideas.

Basic Principle:

Working meetings focus on an agenda of work which is to be accomplished. To prevent the participating interests from confronting each other at a meeting with demands and ultimatums, rather than work on a problem, the various interests should be represented by staff-level personnel who are in sufficiently low positions not to make major concessions if demands were made on them.

Variations:

1. At one extreme of the range of variations, the location team can call a meeting. This involves deciding which interests need to participate, asking them to send their representatives, developing an agenda, and then chairing the meeting.

2. The location team can attend someone else's meeting by asking to be invited.

When the participation of several interests is needed to solve a highway problem, the former approach is to the point and ought to prove very efficient - provided the outcome is not prejudiced by the fact that it is the agency which is calling the meeting. If the location team feels that its running of a meeting would interfere with the purpose of the meeting, it may, in the long run, prove more efficient to attend some other group's meetings and begin to introduce the issue which is of concern to the location team there. This is less difficult because a great number of institutions, groups, and individuals are interested in the highway, how it affects their interests, and how it touches their lives. They often call meetings for the purpose of discussing highway-connected issues.

Example:

A local neighborhood club with a membership of thirty-five housewives met every other week. They usually had a broad agenda, depending on the current interests of its active members; they liked to invite a guest speaker to address one of the issues on the agenda.

An expressway which was to run through the general area was then in the design phase of the location-design process. The state

highway agency had a field office in the community to disseminate relocation information and to help the designers learn about the community and its relevant needs. The junior engineer who ran the field office made it known that he would address any group at the drop of a hat. He was promptly invited to the club's next meeting. Half a dozen women, which was about normal attendance, were present. The highway engineer gave a half-hour presentation in a very informal setting. He used maps of the locality to show the adopted alignment and charts of the location-design process which made the process readily understandable to laymen. The ladies asked their questions as the presentation went along.

The next item on the ladies' agenda was the continuation of a discussion on drugs among the teen-agers in the neighborhood, and the highway engineer left.

This was not "his" meeting; his agenda therefore only consisted of three items: 1) Give them a basic understanding of what the location-design process was and where in that process the agency was at the moment; 2) give them the confidence that the agency would listen to their problems, particularly their perceptions of highway impacts, and 3) get a reading on their main concerns. The issues the women wanted addressed were: 1) Where is the highway being put? 2) When will people know whether and when they will be displaced? What will they get for their properties? Is it possible that they can stay in the neighborhood, i.e., will the agency build some new housing locally?

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Advantages:

Touching base with the various interests prevents the process from proceeding under a mistaken assumption that there is more agreement among the interests than actually exists.

By the same token, such meetings can bring to the surface the fact that there is more agreement than the location team might have assumed.

Disadvantages:

If too much of the community interaction work relies on meetings, the location team can find itself running from one meeting to another. Meetings with private citizen groups have to be held at their convenience - usually at night; this can become quite a burden for the staff.

Highway Applications:

The technique is useful at all-stages of the location-design process - though its purpose varies with the progress of the process.

References:

- Bolsky, M., GUIDE TO GATHERING INFORMATION IN FACE TO FACE INTERVIEWS, Ramsey, New Jersey: Ramsey Wallace Corporation, 1967. (A good discussion about preparing for and evaluating person to person and small group meetings.)
- Cartwright, Darwin, and Fander Alvin, GROUP DYNAMICS RESEARCH AND THEORY, Evanston, Illinois: Rarv, Peterson and Company.
- Lippitt, Gordon L., THE LEADER AND GROUP EFFECTIVENESS, New York; Association Press, 1962.

Miles, M.D., LEARNING TO WORK IN GROUPS, New York: Teachers College, Columbia University, 1959. (This is a program guide for teachers of group skills.)

Wagner, R.H., and C.C. Arnold, HANDBOOK OF GROUP DISCUSSIONS, Boston: Houghton Mifflin, 1965. (A discussion on how to lead a group discussion.)

Zelko, H.P., THE BUSINESS CONFERENCE, New York: McGraw-Hill, 1969. (See especially chapter 12 - this has a very good bibliography.)

Technique #12B

Public Hearings

Basic Principle:

Ideally, in the public hearing everyone in attendance knows in advance exactly what will be said.

A public hearing constitutes the formal ratification of agreements which have been developed in working meetings. Ideally, no one attending a public hearing experiences any surprises; every presentation and every response to the presentation is anticipated. The only thing such a public hearing is supposed to prove is that the public agreement worked out informally is, indeed, a public agreement.

Key Features:

The highway agency, after having developed a course of action with adequate community participation, holds a pre-hearing. It informs each of the affected interests of the substance of its planned public hearing and invites them to express their reactions at the pre-hearing. The pre-hearing is essentially a "dry run" of the actual hearing. All of the lay interests get to see precisely what the agency intends to present, and this gives them a chance to do two things:

1. They prepare their own presentation - be they in support of, or in opposition to the agency's presentation - for the actual public hearing;
2. They may tell the agency what their position will be, and this, in turn, gives the agency a chance to decide whether

it is really ready for the public hearing or whether it should work some more to negotiate for more of an agreement with the lay actors.

If it turns out at the pre-hearing that the location team does not have as much of an agreement on a course of action as it thought it had, it may choose to postpone the formal hearing and return to the task of working for substantial, politically effective community agreement. In that case, it will again hold a pre-hearing when it thinks it is ready.

After a successful pre-hearing, i.e., after a pre-hearing in which the kind of agreement which was thought to be there has been manifested, the location team schedules a formal public hearing.

Besides the required legal announcements of the hearing, the team needs to notify by mail every group or individual that it has reason to believe is interested. The agency has to make sure that the public is well informed about all of the issues weeks in advance of the hearing, so that the various interests have adequate time to prepare their own presentations. This also means that the public has to have access to any information it may need and which the agency has, during this period of time prior to the hearing. This requires the agency to make sure that the newspapers give the issues which will be discussed at the hearing adequate, early coverage; if the papers cannot be persuaded to do it, the agency, as a last resort, should run large, paid advertisements. In this time between announcement of the hearing and the date on which it is to be held, the location team makes every effort to familiarize all affected interests with

the issues by making public displays in municipal buildings, schools, and at other spots where the public is likely to see them. Brochures or other forms of data on specific issues should also be available for the asking from the agency.

At the hearing, handouts are given to each person attending to:

- give him exact, understandable information on the issues, to inform him that the public record of the hearing will remain open for a period after the hearing, and to tell him how he can respond in this period of time.

The hearing should be run by someone who is a completely disinterested party. The moderator should be practiced at running large public meetings.

The location team is called on to make its presentation, as are all other parties who have a presentation to make or a view to register. The moderator must be careful to distinguish between speakers who want to make a substantive presentation and those who want to be recorded as supporting a point of view already presented. Only speakers arguing a point of view not already presented need speaking time; the others need no more than a moment of time.

Graphic material has to be legible for the entire audience.

The issues have to be discussed in enough depth that the layman is neither left in the dark nor overwhelmed (i.e., snowed).

An effort must be made to prevent people from being intimidated from making statements. Microphones in the audience should be placed in such a way that a person does not have to face the whole audience to pose his question or make his statement. One very

effective way of doing this is to have microphones placed in the aisles, about half-way back, so the person will face front when speaking into it.

The time and place of the hearing is set to make it possible for the affected lay actors to attend.

Advantages:

When the formal public hearing is used only to ratify agreements reached through negotiations with the various interests, the dangers of confrontation and polarization are removed. Informally reached agreements also have to be ratified, and so the public hearing serves a very useful function.

Disadvantages:

Because the existence of general agreement is a prerequisite to holding a public hearing, a hearing may have to be postponed if an agreement comes unstuck.

Highway Applications:

The location team uses the hearing for:

- ratification of range of alternative alignments to be studied,
- ratification of a specific alignment,
- ratification of range of design options to be studied,
- ratification of a specific design package.

References:

Bauman, W.E., "Hearing Procedures in Illinois," PAPERS AND PROCEEDINGS OF THE 56th ANNUAL MEETING, Houston, Texas: American Association of State Highway Officials, 1970.

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Technique 13:

Field Work Method

The traditional way an anthropologist sets out to do his field work may have the appearance of a disorganized endeavor which, by the standards of some scientists, hardly qualifies to be called scientific. The anthropologist, the classical participant-observer, takes little paraphernalia along aside from pens, notebooks, typewriter and, if he calls himself well-equipped, a tape recorder for the event of recording meetings. His tools are observation, interpretation and comparison rather than experiment. What is of greatest importance to him is an unbiased attitude.

He immerses himself into a new way of life which is not his own, but the life of the subjects he is studying. The main objective of the anthropologist or ethnographer, who is the recorder of culture, is to become thoroughly acquainted with all behavior of the people in their natural way of life and to explore certain behavior in some depth. In contrast to the questionnaire-oriented social scientist, the ethnographer takes a broad view of the range of phenomena that can be taken into account and pursued further if necessary.

In order to achieve this goal, the ethnographer must first of all be accepted by the members of the community on their own terms. To be accepted as one of the members of the community is essential;

he is to become one individual among those whose life he is studying. If the local people are very much aware of the outsider in their midst, they change their modes of behavior and neither express their normal views nor behave in a manner that is truly their own. Thus, the anthropologist tries to make his presence as insignificant and unobtrusive as possible in order to prevent a distorting influence on the data about the culture he is studying.

Basic Principles:

Traditionally the purpose of anthropologically-styled fieldwork is to explore and discover the culture, or social institutions, etc., of a given people. To carry out this task the commonly accepted beliefs and practices, as well as individual reactions and variations from the general patterns, have to be explored. In order to understand a culture or sub-culture, special attention must be paid to the range of individual manifestations. While these commonly-held values may be vocalized by the people, it cannot be assumed that values rest at the level of awareness of the members who share them; they are often subliminal. The values have to be interpreted and inferred by the researcher. It is precisely for this reason that survey techniques are inadequate for this type of research. Important as survey techniques are for more easily qualifiable data, the cultural patterns of an urban population are likely to fall through the net of any statistical classification. Participant-observation fieldwork brings to light the cultural patterns, the manner in which one way of life may be entwined with another, the clusters of things that are meaningful for the people, and the significance which these

domains have in the eyes of the beholders. Once this task has been completed the researcher has a broad idea of the cultural and social life of a given population; he then can form hypotheses and test their validity via surveys.

Key Features:

For the main part of his research the researcher moves into the community. After having explored and surveyed the community, he begins to talk to individuals in a casual way, looking for an excuse to start a conversation. He then identifies himself properly and tries to arrange an interview. Interviews can be held in the researcher's quarters or the informant's home. He meets repeatedly during his stay with as many of his informants as is possible. This gives him the opportunity to become well acquainted with their total life.

Whatever the researcher's particular interests are, he explores them fully in the given area. He studies phenomena that relate to his particular problem. This method allows him to discover facts as well as relationships that he did not anticipate to be of relevance to his study. For example, a social anthropologist studies the total network of inter-personal relationships which exist within the area under investigation. Being in daily contact with his informants over an extended period of time gives him an intricate feeling of the tone of the local everyday life.

In order to obtain a full view of the gamut of values prevalent among his subjects, the ethnographer has to keep in mind that he cannot restrict himself to certain segments of the population which

are most accessible to him. If necessary he has to let assistants contact those individuals with whom he foresees difficulty in communicating.

The ethnographer must further be willing to take part in time-consuming activities which satisfy newly acquired friends even if he feels that his efforts are not directly responsible for producing new information. He is not limited to one source of information to complement his interviews, he can use official records and other data kept in churches, clubs, local governmental agencies, etc. To further supplement his data he can visit local bars, attend meetings, ceremonies, etc. He must keep in mind that any hour may be important to obtain certain data and that his job is not limited to hours 9-5. In short, the ethnographer has to be aware and ready to take advantage of opportunities as they present themselves.

In order to be considered less of a stranger, an ethnographer may take whatever measures seem fit to make him more participant than observer. For example, some ethnographers in urban situations have, to some extent, adjusted their vocabularies and diction to that of their informants. One resourceful researcher transformed the mispronunciation of his foreign sounding first name into a nickname which proved later to have been a useful accident.

Despite these personal efforts, the ethnographer remains nevertheless an outsider to his informants. This, it must be pointed out, has also certain advantageous consequences. An ethnographer - being not a full member of the community he studies - can communicate among groups whose relations are hostile with respect to each

Other.

Preparations for Carrying out the Research:

Before the ethnographer tackles his project, it is necessary for him to clarify certain issues. He has to define and clarify what he is to study, why, and how. He has to limit the population of greatest interest to him and collect precise demographic data on the area. He also must decide which aspects of the culture he needs to learn about most, in order to help him predict the consequences of certain highway impacts and to help him perceive feasible solutions to the problems created by negative impacts.

The next step consists of preparing a questionnaire, asking factual as well as open-ended questions; this questionnaire is used as a guide for interviewing. After having talked to all potential informants along the lines of the questionnaire, the ethnographer selects those individuals with whom he thinks he can establish good rapport. If he thinks that by doing so he is leaving out significant segments of the local population, it is advisable to hire assistants - who may or may not be members of the local population - to bridge the gap.

Every evening - while the information is fresh in the ethnographer's memory - the data is recorded. Special consideration is given to answers given by the informants that lack explanations of his attitude or point of view. To elicit statements from the informants regarding cultural or social values requires probing for full explanations. Occasionally the same question has to be approached from different angles. It is not always easy for the informant to

verbalize his thinking and his deeply engrained feelings and beliefs; this requires patience on the part of the researcher as well as on the part of the informant.

It is important that the researcher can formulate his questions in a way that is familiar to the informant. In other words, he has to make momentary adaptations to the lifestyle of each informant. Questions prepared for the second or some later interviews with an informant tend to take more and more time because they probe deeper and deeper. It is the experience of ethnographers that the majority of informants are willing to spend surprisingly long periods of time to probe and search for answers to the very general and often difficult questions presented. While the interview is in progress, as well as before and after the interview, the ethnographer never ceases to observe what goes on around him.

Variations:

From the description above of how an ethnographer proceeds collecting data, it is evident that no rigid structure underlies these proceedings. If the informant is available he may meet him at different times of day as well as at different locations. At one time the setting may be a kitchen where the researcher interviews his informant over a cup of coffee; another setting may be the local bar on a Friday afternoon when and where certain people have their customary social gatherings; still another scene may be a town meeting where debates over controversial issues take place.

Example:

The following is a quotation from the description of one ethnographer's way of going about his field work in connection with a highway controversy.²

The first day of my work was simply a long, slow walk along the two-mile corridor involved; I took notes when I could do so inconspicuously and typed up as full an account of my observations as I could afterward. On subsequent days, I stopped and talked to people who looked as if they had time to spare me - a grocer in a small store, a young married man on his front steps, an old lady on her porch, a withered, crippled fellow sitting on a wooden stoop, a lady locksmith, a cafe owner, a filling station operator, and so on. I talked with each about the neighborhood, how long they had lived there, what they liked and disliked about their homes and neighborhoods, their impressions of the likelihood of the (expressway) coming through, and who they thought was behind it...as my work progressed, I found myself paying more and more attention to people's ties to their homes, neighborhoods, local institutions, and nearby relatives and friends. I began to see these ties and the length of time people had resided in their home and neighborhood (often at more than one address) as criteria relevant to their strength of feelings about wanting to leave or not wanting to leave where they lived.

Advantages and Disadvantages:

If a researcher limits himself to statistical investigations based on questionnaires, a wide range of social or cultural phenomena are intrinsically inaccessible. It is in the area of non-statistical information that an anthropologist is the expert. While the sociologist starts with the premise that the field of

² Fellman, Gordan, "Sociological Fieldwork is Essential in Studying Community Values," HIGHWAY RESEARCH RECORD #305, 1970, pp. 125.

observation consists of units - his unit may be the community of the individual - the anthropologist thinks of his data as being made up of "systems of relationships". For a head of a family is not simply a unit, he is a complex of roles, exemplified in his being a husband, a father, an employee, a houseowner, etc.

From the differences of the research methodologies it follows that statistics-oriented social scientists can investigate a large population in a relatively short time. However, the participant observation approach can deal only with a small population over a period of several months or a few years.

The criticisms that can be levelled against the standard sociological methods are the simple converse of those which the sociologists are likely to level at the anthropologists. The sociologists presuppose uniformities which perhaps do not really exist; they are forced to assume that before they ever start questionnaire inquiries. They assume that they know by intuition what the significant variables are. On the other hand, the microscopic investigations of the anthropologists may well be of such a particular nature as to have little general validity. To overcome both shortcomings, teamwork of both the survey researcher and the participant-observer would be a solution.

Possible Highway Applications:

The method lends itself to learning things about the community which are not obvious to the location team. Thus, it is best employed during the first (and maybe the second) phase of the location-design process to help the team generate concepts about the community, how

it may be affected by the highway, and how the negative effects can be taken care of.

References:

Williams, T.R., FIELD METHODS IN THE STUDY OF CULTURE, New York: Holt, Rineholt and Winston, Inc., 1967.

Gutkind, D.G., and P.G. Jangmans, edit., ANTHROPOLOGISTS IN THE FIELD, The Netherlands: Royal Van Corcum, Ltd., 1967.

Berreman, G.D., BEHIND MANY MASKS, Monograph #4, published by Society of Applied Anthropologists, November 1962.

Junker, B. H., FIELD WORK: AN INTRODUCTION TO THE SOCIAL SCIENCES, Chicago: University of Chicago Press, 1960. This volume contains an extensive bibliography.

Technique #14

Using Advisory Committees

Basic Principle:

Public agencies often find themselves forced to make decisions which have far-reaching consequences for many segments of the public. However, the staff is not intimately familiar with all of the values held by the various segments of the public. Several means have been devised for bringing more sophisticated insights about community values than the staff can supply to bear on the decision-making, the establishment of citizen advisory committees is one example of such a vehicle.

It has become increasingly common to utilize citizen advisory committees to advise decision-making in such areas as urban renewal, Model Cities, criminal justice planning, and more recently in highway planning.

Two assumptions are implicit in the concept: 1) the duly elected or appointed authorities are not fully representative of the public; and 2) a body which is selected for the express purpose of being representative of the public, i.e., citizen advisory committee, will be representative.

Key Features:

Advisory committees, typically, are appointed by the local municipal administration, usually the mayor. Consequently, such committees rarely represent all the community interests but rather the mayor's view of "the community". They therefore tend to be treated with suspicion and resentment by those not included.

For this reason, it is recommended that membership be open to all who want to work on the committee and that all advisory committee meetings be public.

The functions of the advisory committee vary. In general, the committee gathers data, reviews community plans, distributes information, looks for impacts, and analyzes and helps devise alternatives. One important function, it seems, is to react to proposals. The scope and depth of the committee's involvement is its own decision (though sometimes this may be outlined by law).

Variations:

The name "citizen advisory committee" may have a negative connotation, especially in communities where such committees have been abused - rather than used. Under this condition the committee should be made completely open or it should not be used at all.

Example:

In one state the highway agency asked six cities to set up citizen advisory committees. Each committee met regularly with the agency to review data and suggest options. The meetings were open, and committee members made a special effort to inform their neighbors and solicit community opinions. The agency used this in conjunction with other techniques to get a sense of what those communities wanted.

Advantages:

- An open community advisory committee may act as a mechanism for increased participation.

- The community advisory committee may be an efficient source of information about the community.
- The committee may provide new alternatives and may be able to give the location team a preview of how the community at large will react to specific proposals. Committee meetings also serve as a forum for discussion of local problems.
- The committee may act as an ombudsman.

Disadvantages:

- The disadvantages outweigh the advantages; its use is probably a liability in most contexts.
- Community advisory committees have so often been misused; they have often been vehicles to prevent local participation - the very thing they, ostensibly, are supposed to accomplish.
- The committee should never be used as the sole source of information about the community. Even self-selected members may not be representative of the groups to which they belong, and not all groups will have a member who can join a committee.
- An advisory committee tends to legislate for the community, but it has no legitimate basis for doing so.
- Certain members are bound to be more articulate than others and may dominate the proceedings.
- Finding a time at which all those who wish to participate can meet may be impossible.

Highway Application:

Questionable

References:

Claum, P., "Planners and Citizens Boards: Some applications of Social Theory to the Problem of Plan Implementation," JOURNAL AMERICAN INSTITUTE OF PLANNERS, May 1968, page 130.

Technique #15

Hiring an Advocate for the Community.

Key feature:

The highway agency provides funds to the community, or to adversely affected interests to hire a consultant who then represents them.

Basic Principle:

One particular view of the relationship between the community and the highway agency leads to the conclusion that constructive interaction is most likely to result if the location team interacts with professionals who represent the interests of the community - rather than directly with the individuals, groups, and institutions which make up the community.

Also see discussion under Non-Techniques.

Major variations:

- A. Supervision and accountability
 1. Adversely affected interest groups, minority groups, etc., can choose the consultant, with the help of the highway agency, if needed. If the highway agency chooses the consultant, he tends to lose credibility with the community.
 2. The consultant may be paid by the agency; or funds may be sent to the community, who, in turn, pays the advocate. Control of the paycheck affects the perceived allegiance, if not the actual allegiance, of the consultant. It is in the community's best interest to come up with its own funding so there can be no question about the agency's

influence.

B. Scope of the consultant's task:

1. The consultant may have an open agenda or his tasks may be well defined. In any case, the community is his client, and he works for it.
2. The consultant may help the community take the initiative by formulating original plans, or he can serve as the community's technical consultant to help them review, and react to, plans developed by the agency.

Advantages:

- Since the consultant is responsible only for looking after one interest, he does not have to temper his position and can be a more forceful representative and may be better at understanding and representing this interest than the location team could ever be, with its responsibilities.
- With a consultant's help the community is better able to understand and interpret technical agency studies.
- The community may feel more confident that the team cannot hide political decisions behind false technical constraints, especially if they hire and pay their own consultant.
- The consultant and community may detect flaws in the team's plans.
- The community gains the capability of making its own proposals; it thus needn't resort to outright opposition, when it doesn't like the team's plans, as its only strategy.
- The consultant adds realism and technical responsibility to the community.

Disadvantages:

- If paid or hired by the agency, the consultant may lack credibility in the community.
- If the agency pays the consultant, it may well find itself in the position of supporting an adversary.
- Since the community is made up of many interests, the question arises: "Which ones should have advocates?"

Highway Applications:

The most constructive application of the concept would be in the development of a solution consisting of a comprehensive package of features, e.g. including open space, housing, mass transport, etc. Here the location team should like to work with well qualified advocates for the various affected interests.

References:

- Davidoff, P., "Advocacy and Pluralism in Planning", AMERICAN INSTITUTE OF PLANNING JOURNAL, December 1965.
- Peattie, Lisa, "Reflections on Advocacy Planning", AMERICAN INSTITUTE OF PLANNING JOURNAL, Vol. 34, pp. 80-88.
- "Whom Does the Advocate Planner Serve", SOCIAL POLICY, May-June 1970, pp. 32-37, July-August, pp. 33-41.

Technique #16

Operating a Field Office.

Key Feature:

Location team staff is made available in the community at times convenient to local residents. The staff might do the following:

- answer questions and give out information,
- listen for problems and look for opportunities to use other community interaction techniques,
- use the field office as a base for managing the community interaction process,
- try to develop features as parts of solutions to specific local difficulties caused or anticipated by the proposed highway.

The information flow from the community is likely to govern the use of many community interaction techniques and influences the type of information sent to the community. Thus, the staff must be willing to address the problems of those using the field office, whatever their problems are. The staff should be made up of perceptive, innovative people who are in a position to make changes in their own operation if the need should arise.

Basic Principles:

Operating a field office is an expression of the spirit that it is essential, though difficult, to reach all the affected interests - be it for the purpose of learning about their needs or be it for the purpose of having them learn about the location-design process, the alternative courses of action, and their respective consequences.

A field office is physical evidence of the fact that a highway is being planned; it has the potential for serving as a communications link between the location team and some interests which might not be reached by any other means.

Variations:

- Whether it is located in a permanent office or in space rented for the duration of the project; it should be easy to find for the local people.
- A house trailer much like construction field offices are well suited to the task.
- A transient office in an easily moveable trailer, for dispensing information at fairs, shopping centers, and hangings, etc., gets heavy use and is most useful when trying to reach the general public rather than a very local population.
- Borrowed space in a local City Hall can also serve the purpose under some conditions.

Example:

One location team decided to establish a field office to give out information to the communities along the proposed alignment. It was set up right after the route had been adopted but before design details were worked out. The first problem was to find a location for the trailer. The location had to be accessible to public transportation, large enough to accommodate parking, it had to be visible, convenient for pedestrians, and near the center of the adopted alignment. After it was located, the office primarily gave out anticipated relocation procedure information until the design details had been worked

out, then it distributed that information. Office hours were adjusted to the needs of the public. After that, its role shifted to the more active role of coordinating the relocation housing and relocation assistance programs. Once these problems were solved, the field office was closed down. During all of the time that it was open, the office also was used to coordinate the many different forms of community contact that had to be made and maintained along the corridor.

Advantages:

- A field office is a clear manifestation of the location team's desire to communicate.
- The highway department becomes visible. To many people the field office is the highway department; - it becomes the focus of their attention.
- The office provides a setting for small informal meetings and one-to-one communication.
- The office provides a ready target for criticism, allowing the agency to detect problems earlier.

Disadvantages:

- A field office might raise expectations of community residents faster than the highway agency can fulfill them.
- If the office is not well managed, its presence can alienate people and can turn into liability.
- The local government may not want a field office around for various reasons, not the least of which may be that it wants to play the role of spokesman for the community and thus may be

against direct contact between the local public and the location team.

- The people who use the trailer are self selected. They are likely not representative of the whole community. (But they are more likely to be representative than those who attend public meetings.)

Highway Applications:

A field office, run by the location team, is particularly useful in location-design phases 2, 3, and 4.

Technique #17

Analyzing Past and Current Plans Made by or for a Particular Community.

Key Features:

Analysis of community plans can provide a catalogue of issues and ideas for potential alternatives. The currency of the plans must be evaluated, however.

For each plan ask:

- a. Is the plan up to date?
- b. Has the plan been ratified by all or some of the community population? What people or groups have supported or opposed this plan?
- c. Are the present values of the community reflected in the plan?
- d. Does the plan provide a program to accomplish its stated goals?
Do people in the community feel that the plan can accomplish these goals?
- e. Are there opportunities for the highway department to enhance these goals or to fulfill parts of the plan?
- f. Is the highway agency developing alternatives that can complement or fulfill the transportation element (if any) of the plan?

The team may be able to catalyze reevaluation and revision of the community's plans and goals.

Basic principle:

Plans and programs developed by individuals, groups and institutions are an expression of their values and priorities. If the location team understands how those plans were developed and if it then

analyzes the plans sensitively, it can learn not only about the substance of the plans but also about the values held by the interests who made the plans.

Major variations:

Depth of study is the most important variation. The plans can be scanned, read and used for reference, or studied in depth. In any case, the plans should be synthesized or condensed by the reviewer for reference by other team members.

Types of plans:

comprehensive or master plans for communities (typically funded by Federal 701 funds),
 traditional land-use inventories and plans,
 master plans for regions, or subregions, or counties,
 plans of large institutions and regulated services (electric company), and
 plans of city services (water, sewage, street repairs), and
 plans of community interest groups (home owners associations, tenants groups, service and garden clubs).

Advantages:

- Reviewing plans is a way to obtain factual information about a community in a short time.
- This can provide, if used with caution, a suggestion of some of the prevailing values in the community.
- Information gleaned from plans can aid in the generation of impact prediction data for the community in question.
- The act of studying a community's plans is a demonstration of con-

cern; and by obtaining information about the community by studying the plans, the location team can communicate better and with more relevance.

Disadvantages:

- Community plans are often developed to meet federal or state requirements. For instance, a plan is necessary to participate in federal urban renewal or rehabilitation projects. Many such plans have been developed by an outside consultant who knew how to satisfy the external (federal) requirements but did not necessarily experience empathy with the community. Such studies may be of limited use in identifying the goals of anyone in the community. It is necessary that the highway department know which if any community residents feel that their goals are expressed in the various community plans.
- Often highway agencies look at only the transportation element, ignoring other valuable information contained in the plan. The transportation element is not necessarily the most important part of a community plan.

Highway application:

This technique is used during the initial survey and issue analysis stages by the location team. If the location team can act as a catalyst for the community to reevaluate its plans, the technique may be used in all stages of the highway location process.

References:

Altshuler, Alan, THE CITY PLANNING PROCESS, Ithaca, New York:
Cornell University Press, 1965.

Rabinowitz, Francine, CITY POLITICS AND PLANNING, New York:

Atherton Press, 1969.

Goodman, W. I., (ed.), PRINCIPLES AND PRACTICE OF URBAN PLANNING,
(4th edition), Washington D. C.: International City Managers
Association, 1968.

Technique #18

Reviewing Local Election Issues.

Basic Principle:

Local election issues tell a lot about local values. Election issues are not necessarily the same as the concerns otherwise expressed by the community. When combined with an analysis of local plans, reviewing election issues can tell the location team something about the kinds of issues that are prone to become controversial and which are not.

Key Features:

This is a special application of Technique #19, the Background Study. Elections generate issues which, if interpreted correctly, can provide useful background about the municipality, the priorities that are or have been proposed there, the nature of its leadership (both in and out of office), the supporters of that leadership in the city, etc. Where they are available, newspaper files covering the last several elections offer the best source of such data. In most small municipalities and large cities alike, election issues are given good coverage.

Issues well beyond specific transportation questions are reviewed: property taxes, relative importance of schools, attitudes about industrial development versus housing development, open space and environmental issues, etc., can be examined. The character of leadership in the city, and of the competition for leadership, can be useful in determining location team strategy. Newspaper discussions of elections can be a useful source of information about neighborhood and

interest groups, and the roles they play in the local decision-making.

Principal political leaders should be contacted as a normal part of the community interaction process to discuss the merits of alternative concepts for highway plans, but not specifically with respect to the issues suggested above. Apparent involvement of the highway agency in local political controversies - other than the proposed road - could be disastrous to the effort to achieve an agreement on a plan for reasons unrelated to the merits of the plan. Wanting to learn about local political issues should not be confused with wanting to influence local political affairs.

Variations:

- The agency can review election issues for the specific purpose of determining transportation and transportation-related issues. However, it is usually important to include other topics in the search.
- The agency can rely on interviews as its major source of information, using the media to document and expand the interview information. The agency then keeps in touch with all candidates in current campaigns, including the anti-highway ones.

Advantages:

- This technique can be used to anticipate adverse issues which the local community places great importance on.

Disadvantages:

- The technique easily could be misinterpreted as the agency's attempt to influence local politics - and, in fact, it may be tempting for the zealous highway professional to do so.
- Not all values are represented in election controversies. Many

of the most basic values may never come up or be argued on as part of the election issues. They may surface, nevertheless, when threatened by a large public project. The technique, thus, is only a supplement for other techniques; it cannot be used by itself alone.

Highway Applications:

For past elections, this technique is used during Phase I (Initial Survey period). For current elections, this technique can be used at any time during the location process. The location team is usually responsible for the techniques.

References:

Lowery, R. P., WHO'S RUNNING THIS TOWN? COMMUNITY LEADERSHIP AND SOCIAL CHANGE, New York: Harper Row and Co., 1968.

Technique #19

Conducting a Background Study.

Basic Principle:

Background studies have to be prepared all the time; some require a few man-hours of work, others require thousands of man-hours, but the principle is the same: an issue arises and all relevant information has to be organized so that it sheds light on the issue and makes it possible to make an informed decision about the issue. Obviously, the kind of decisions which have to be made determines the format of the background study.

Key Features:

Throughout the highway decision-making process new issues may arise. For every new issue, the location team must try to understand what interests are involved and what the form of involvement or conflict is. It does this by conducting a background study.

A background study can take a few hours or a few years. Such a study is not intended to uncover everything about the issue but is designed to uncover enough information to make it possible to make intelligent decisions. Consequently, the depth of the background study is determined by the kind of issue that needs to be decided. Ideally, the team reviews the entire history of the issue and any related issues. It should understand the social and economic reasons the issue developed as it did and should try to understand the personalities involved. The agency then can relate this history to the present issues to understand why individuals are involved as

they are in the conflict.

To carry out a detailed study, the team can use a number of sources. Histories, library records, old news stories, and formal documents can be investigated without intruding into the controversy. The team also can interview the parties in the issue to see what they think and can get opinions of those who have watched the controversy develop. The important thing is that the team should use any technique necessary to understand all points of view.

Variations:

The background study can concern technical questions and be a way of answering objections, or the study can investigate political questions and controversies. The latter can help the team avoid making political mistakes.

Advantages:

- The location team becomes more credible to the extent that it shows an understanding of the community problems.
- With political background studies, the engineer develops a new view of the process of controversy.

Disadvantages:

- One or both of the disputing parties is bound to feel that the team is meddling where it has no business.

Example:

A company had plans to develop industry which would employ local residents on land already owned in a city. The Community rejected the company's proposals. Upon investigation, it was discovered that

the opposition had arisen because community residents had not been included in the planning process and thus were suspicious about the purposes and the impacts of the proposed development.

The highway agency actually had something quite similar in mind. The brief background study quickly told them not to proceed on their present course, that they better involve the local community early or forget the whole idea.

Highway Applications:

Background studies are useful throughout the route location and design process whenever a problem arises. They are of special use in the initial survey and issue analysis phases.

References:

Lazarsfeld, Paul F., and Morris Rosenberg, (eds.), THE LANGUAGE OF SOCIAL RESEARCH, Glenco, Ill: Free Press, 1955.

Technique #20

Collecting Data, Carrying out Surveys, etc.

Basic Principle:

Though data-collection is bound to constitute a major effort, it is strictly a means to an end. The end is always the same: some issue needs to be settled; the location team decides what kinds of facts could settle the issue and how those facts would best be collected. Then, and only then, is a survey - or whatever other method of data collection - chosen and designed.

Surveys are the most popular method. Most of them take advantage of the fact that when samples are chosen wisely - i.e., when the sample is "designed" properly - information about that sample can, with specific levels of confidence, be used to make statements about the entire population from which the samples were chosen.

Key Features:

Much data about a given community is compiled by censuses. These include the censuses of population, of business, of labor, of manufacturing, and reports on public construction, on public health, and on the governments of the federation, the state, and city. Data sources also exist for education, taxes, geographic characteristics, etc. Official records, media, etc., also are important data sources.

In some cases it will be necessary to conduct a survey. Although the best way to gain information about a group is to interview all of its members, time and cost limitations usually make this impossible. Interviewing a carefully selected sample of the group permits statements to be made about the entire group with very little loss

of certainty.

1. Surveys of Facts

Surveys are used when some interaction with another person is required to learn the facts of interest. Many facts can be gathered without interaction, as is done in windshield surveys. However, questions such as how long persons have lived at their residence, their travel patterns and modes, extended family relationships, and so forth, must be elicited from people on a personal basis. This requires reaction research; i.e. the subjects have to react to questions that are posed for them.

Advantages:

- Surveys produce numbers -- usually. Hypotheses about the character of the neighborhood can, if the survey is designed and performed correctly, be either rejected or, with some confidence, supported.

Disadvantages:

- Cost can become substantial. Highway agencies are aware of the high costs per interview in O-D surveys and of the difficulties of training and supervising personnel to carry out interviews.
- Surveys cannot really get at the nature of a community. Holistic research, such as anthropological field work is needed to generate the hypotheses; only then surveys may be used to get specific measures of phenomena.

Highway Applications:

Fact surveys are aimed at getting facts; that's all. They cannot produce concepts. So, whenever facts are needed, and a survey appears to be the right method for gathering the facts, the technique ought

to be used.

2. Surveys of Opinions

Opinion surveys attempt to elicit people's preferences between alternatives or their viewpoints about particular issues. Opinion surveys ask for responses to specifics such as preferences between A and B. It is necessary to differentiate between attitude and opinion surveys, although the line will not be perfectly sharp. An opinion will be expressed about a real choice facing the respondent: Does he favor a partial taking of his property plus the construction of a barrier, or does he prefer full taking of his property? An attitude survey asks about potential, general features in order to infer underlying preferences.

Advantages:

- Opinion surveys, like polls, can - provided the location team has reason to trust the survey - give decision-makers a guide to their constituents' preferences among particular alternatives or on particular issues.

Disadvantages:

- The dangers of misuse are many. Surveys can be designed in such a way that they bring out particular response patterns; in fact, it is difficult to do otherwise. The results can far too easily be interpreted as the analyst sees fit. The team must avoid the temptation of presenting a neat stack of data which represents the "community's values" as an easy way out of the more time-consuming process of bringing those values to bear on decisions and recommendations. The "short cut" of a survey, used alone as the sub-

stitute for an open iterative process, runs directly counter to our basic approach which is aimed at having the local interests bring their values to bear directly on actual decisions.

- Attitude surveys are very difficult to design and equally difficult to execute well. In highway planning, one is attempting to predict public choices about "products" with considerably more complex attributes than after shave lotion or breakfast cereal - which is the context where this technique has been used with some success. Furthermore, considerable problems of supervision are likely to arise in the execution of the survey.
- Surveys may be interpreted so that too much emphasis is put on judgments developed during just a few minutes of contemplation of the issues involved. This is the antithesis of the long iterative process through which the location team attempts to educate itself and other participants about the impacts of alternative choices. Values tend to develop, change, and become clarified during a long interaction process.
- Survey analysts sometimes aggregate responses over a particular population. But this tends to hide significant differences of opinion and values when subpopulations exist.
- Location team decisions should never be made solely on the basis of survey data,³ first, because a survey is not a referendum, and

³Use of referenda for rating alternatives was one of the least preferred methods of route location which Bishop examined in California. (Bishop, Bruce, Clarkson H. Oglesby, Gene E. Willeke, "Community Attitudes Toward Freeway Planning: A Study of California's Planning Process", HIGHWAY RESEARCH RECORD #305, Washington, D. C.: Highway Research Board.)

second, one can read into a survey just about what one wants to.

- Such surveys are extremely sensitive to how the questions are worded, how they are asked, what kinds of responses are recorded, and the format they are recorded in, etc., so that we must conclude that it is not a business for amateurs; the typical location team cannot design and/or supervise an opinion poll or attitude survey.

Highway applications:

The location team uses opinion surveys only if it cannot find any better techniques; and when it does use them, it hires qualified social scientists to carry them out and to interpret their results.

References:

- Fishbein, M., READINGS IN ATTITUDE THEORY AND MEASUREMENT, New York: Wiley, 1967.
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- Weiss, Robert T., STATISTICS IN SOCIAL RESEARCH, AN INTRODUCTION, New York: Wiley, 1968.
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Technique #21

Mapping Socio-Political and Environmental Data

Key Feature:

This technique is especially useful for internal use by the location team; it may also be used, with caution, as a display technique to get reactions from the community. Two-dimensional, geographic maps are used to display social, political, or environmental data that is normally presented in tables or text.

Basic Principles:

1. Data which are typically available only in written or tabular form may, when placed on a map, suggest geographic patterns that cannot be discovered any other way.
2. Maps are a very efficient way to communicate a lot of data to the professionals working on the location team.

Major Variations:

Some of the types of maps that may be useful are: projections, overlay maps, and base maps. Some variations are:

contour maps	isometric maps
density maps	models and three-dimensional maps
point maps	

Mapped data may be used as working material for the location team only, or as displays for professional use. As such, they may help the agency discover patterns and may be useful in communicating information and soliciting critiques. Maps may also be of aid in public displays.

Example:

A map might be used to plot the residences and businesses of all the political officials of a town. This may suggest reasons for controversy with certain officials. Income or ethnicity also could be plotted on a map to suggest impacts of alternatives.

Advantages:

- Maps can be more efficient for communicating some kinds of information than writing.
- Geographical relationships are easy to visualize.
- Mapping may show the team where their data is weak.

Disadvantages:

- Aggregate data may be all that is available; if this is the case, a meaningful map cannot be made.
- Some data is difficult to map because of the format it is available in.
- Some people cannot read maps.
- Too much information can be read into a map. Data can be "created" by producing maps on the basis of insufficient data.
- Maps might offend local residents because they are very specific. They may generate controversy if they display information that local residents would rather hide.

Highway Applications:

This technique could be used throughout the four phases of location. The initial survey maps would be used primarily for discovering patterns. The issue analysis maps would be used to discover patterns and to facilitate communication among professionals. The design and

negotiation phase would feature maps intended for public display and maps which facilitate professional communication. Ratification should require only public maps. This technique is carried out by the location team.

References:

Passonneau, Joseph R., and Richard Saul Wvman, URBAN ATLAS: 20 AMERICAN CITIES, Cambridge, Massachusetts: MIT Press, 1969.

Technique #22

Illustrating the Final Form of an Alternatives in Laymen's Terms

Basic Principle:

Not all laymen can visualize from plans and drawings what a proposed alternative really will look like when it is implemented. This technique is a recognition of this problem and attempts to minimize any possible misconceptions on the part of the public about the alternatives in question by looking for all feasible methods of getting the message across.

Key Features:

The components of each alternative are presented in clear, concrete terms. The location team might:

- produce models and renderings of the final product;
- place physical markers in the community showing where the roadbed will be located, where the landscaping will start, how high the ramps will be, etc.;
- present estimates of changes in tax rate, costs of alternative housing, accessibility to convenient shopping, etc., in laymen's measures, e.g., rent will go up \$12 per month, taxes will be \$10 per \$1000 higher, a local store will have 500 more items on its shelves;
- reproduce predicted noise levels in the neighborhoods.

Example:

In Switzerland, before a person can erect a building, he must mark off the corners of the structure with wooden poles. These poles are the height of the walls and have small wooden caps which show the

pitch of the roof. All neighbors can see this mock-up for several weeks before the local hearing takes place to determine whether a building permit should be granted.

In the United States, a few advocacy groups have marked with white paint the actual route of a proposed expressway. They posted signs which explained the lines and indicated how high the elevated expressway would be.

Advantages:

- The public might spot relative impacts or problems in the alternatives that the location team had not detected or anticipated.
- Chances of misunderstanding are reduced.

Disadvantages:

- Assuming that we are not interested in misleading anyone, this technique has no disadvantages.

Highway Applications:

The location team uses this technique during the design, negotiation, and ratification phases. It marks out the highway in a manner that lets everyone visualize where it will be and approximately what it will look like.

Technique #23

Presenting the Public with a Range of Alternatives

Basic Principle:

The various interests which make up the community typically do not articulate their values and priorities. When they do, it remains an open question how valid such statements are. If, however, the location team can place before the community a whole range of concrete, feasible alternatives which gives them the opportunity to make actual choices, there is no question that their "real" values are brought to bear on these choices. Consequently, one reliable way of getting at an interest's values is to offer a choice among alternatives which incorporates different values.

Key Features:

The location team first develops alternatives which respond to the needs of specific local interests. If the values of two interests conflict, alternatives are designed to highlight each value. As values of different groups are stated, the location team designs preliminary alternatives that satisfy each group.

The location team then presents its alternatives to the public. It must be sure that the alternatives are clear, that the public understands that these are for discussion, and that the public understands the values embodied in each alternative, that the agency does not have a preferred alternative.

The agency must show that each alternative is feasible, that no alternative is worse in all dimensions than another alternative, or else the public may think that each alternative is just a straw man.

At all times the location team should try to get feedback both from those who help design and those who see the alternatives. The team should record the public reactions on each alternative. This feedback can be used by the agency to modify the alternatives and to devise others.

Since this technique is designed to help determine their own values by having to make choices between alternatives, the different alternatives must be presented in enough detail that their differences are clearly distinguished but not in so much detail that they become confusing. They should be presented informally and the location team should get the feedback informally. The local interest can, with the help of these alternatives, determine what kinds of trade-offs they are willing to make.

Variations:

The range of alternatives could be variations on one theme. The variations could be design differences on the theme of one alignment, i.e., the range of contents of the package of design features.

Example:

A highway agency developed several alternatives, all of which would take housing. After considerable opposition to the highway, a community advocate developed three more alternatives. One would take industry and a lot of jobs but stay away from homes; another would jeopardize the expansion of a nearby university and impede the U.S. space program but stay away from homes and some jobs. The third would destroy recreation areas and present aesthetic problems along a river but stay away from homes and jobs. When confronted with the

alternatives, some local citizens chose the one that would hinder the space program or the alternative that would be a visual blight but very strong interests spoke out against these alternatives as well. The city officials saw little difference between losing jobs and losing homes.

Advantages:

- The public understands all the alternatives that have been investigated.
- This technique stimulates discussion and exchange in the community. As a result, the residents come to know each other's opinions and may better be able to spell out what the real features are that they are looking for in a design package.
- In looking at substantially different alternatives, the location team clarifies what the major trade-off options are.

Disadvantages:

It is hard to do.

Highway Applications:

This technique is fundamental to our approach; it is used during the issue analysis phase and at the beginning of the negotiation phase of route location.

Technique #24

Initiating Necessary Legislation When Constraints are too Rigid

Basic Principle:

If the statutory constraints which are imposed on the location-design process and on the location team are so rigid as to make it impossible to develop alternatives which are feasible, equitable, and desirable, then the best course of action may very well be for the location team to turn its attention toward removing these constraints.

Key Features:

When the location team finds that any equitable and desirable alternative is infeasible because statutory constraints prevent it, the location team addresses the problem of getting those statutory constraints relaxed; the location team tries to get the existing legislation changed or to get completely new legislation adopted.

The team does this by making it publicly known that only a relaxation of the constraints will allow for an equitable solution and by providing technical help to legislators who express an interest in sponsoring legislation to relax the constraints.

Variations:

The highway agency can work to change its own restrictive operating policies. This may require less public discussion and legislative co-operation but more soul-searching.

The highway agency can support the removal of constraints which operate on communities, cities, or other agencies when these constraints prevent the implementation of an equitable solution to a highway problem.

Example:

An analysis of the relocation problems predicted for a proposed free-way in a major city showed that the existing legislation did not allow for an adequate solution; legislation broadening the definition of "highway use" was needed, permitting the highway agency to create replacement housing and to pay the owner-relocatees more than "market value" for their houses. The highway agency took special care to work with the local (Democratic) assemblyman, as well as with the (Republican) governor, in drafting the legislation and in seeing it through the legislature. As a result, the community today views the legislation as having been written to permit the highway agency to deal more fairly with relocatees.

Advantages:

- The range of feasible solutions broadens.
- The highway department maintains credibility.
- Bringing constraints in line with contemporary values improves morale of the personnel trying to generate good solutions.

Disadvantages:

- Some employees, as well as some lay interests, may be defensive of the status quo.
- When seeking legislative change, the agency should not over-promise; only the legislature can create legislation. The team's role is strictly one of giving advice; the legislators determine whether the advice is to be followed.
- Typically, the legislative process is slow; this may mean that the new legislation may not be enacted in time to help the very project which raised the issue in the first place.

Highway Applications:

When highway department funds cannot be used to correct some of a highway's impacts, the constraints on those funds should be thoroughly reviewed.

Technique #25

Sensitivity Training and the Laboratory Method

Basic Principle:

The idea is to improve understanding and rapport within a group. This may be achieved by focusing on a group's internal communications, its members' emotions, their socialization, or any of a number of other elements that are present in a group relationship. The members open themselves up in an effort to understand the dynamics of the group; usually they try to become more sensitive, more creative, and thereby more responsive.

Key Features:

A group uses the laboratory method when it takes time to explicitly study and discuss its own dynamics in addition to doing its task. A group with a task to do may find that personality differences, poor listening, misunderstanding, differing expectations, power and achievement struggles, poor communication, etc., get in the way of completing the task. To make themselves more efficient and perhaps learn something about group dynamics, the members from time to time focus on their own processes.

Sensitivity training is also labeled training sessions, training groups, T groups, or encounter groups. A group of five to fifteen people with a trainer together investigate their personal behavior in groups and how their personalities affect other group members.

The laboratory method, T groups, encounter groups, sensitivity training sessions, or whatever the particular technique may be called, does not lend itself to implementation by amateurs. An experienced

trainer - typically with a background in social psychology - needs to guide a group.

Variations:

There are many variations in this technique. Who participates - the location team, the agency staff, the agency management, community leaders, citizens committees, consultants? What problems should be addressed? How long do the training sessions last? Two days? Two weeks? What types of follow-up are appropriate? Most of these questions have to be answered when the agency invites the qualified trainer into its organization.

Example:

A highway agency holds bi-monthly sessions where the project leaders from all location teams and professionals from academic institutions meet for two days of very intense discussion of the most basic issues that arise in their work.

Other Advantages:

- Argynis summarizes one value of sensitivity training thus: "...the values underlying the (method)...are to help individuals become aware of and...(accept) their feelings, values, and ideas; to experiment and takes risks with new feelings, values, and ideas; to increase their individuality, non-conformity, self-responsibility, and internal commitment."
- One of the method's potentials lies in the development of the participants' leadership capabilities, their tolerance for different ideas, their general ability to function as part of a team.

Disadvantages:

- Sensitivity training can cause great mental stress in individuals who are unstable psychologically.
- Unless it is used as part of an over-all extensive organization change program, the training sessions cannot contribute much to making the location team more sensitive and responsive, and may leave the individuals frustrated.
- Since the technique produces changes in people's attitudes, values and commitment, it is difficult to evaluate; any evaluation must be subjective.

Possible Highway Applications:

The laboratory method is no panacea; it is best used only for achieving those learning goals for which it has a real potential; it should thus be used:

- inside the highway agency to make the agency more responsive;
- for top engineers and administrators to afford them the opportunity to examine what they are doing and how they are doing it, in the most thorough way for professionals who are wrestling with problems for which no one seems to have any good solutions, problems for which the agency is really not prepared, e.g., designing and administering the implementation of joint development concepts;
- for the development of new, better operating procedures and training programs;
- for the internal self-evaluation of the location team's performance;
- for determining top level professionals' responsibilities vis-a-vis the various interests that make up the public.

Sensitivity training should be only a prelude to more formal interaction, such as conferences, seminars, lectures, etc. When used thus, the technique can be used constructively throughout the highway agency. However, the technique should never be employed without the help of a qualified trainer.

References:

Argynis, Chris, "T-Groups for Organizational Effectiveness," HARVARD BUSINESS REVIEW, 42(2):60-74, 1964, p. 67.

Batchelder, Richard L., and James M. Hardy, USING SENSITIVITY TRAINING AND THE LABORATORY METHOD; AN ORGANIZATION CASE STUDY IN THE DEVELOPMENT OF HUMAN RESOURCES, New York: Associated Press, Library of Congress catalog card number 68-20367.

The National Council of YMCA's has, at this point, had over 20 years of experience in using sensitivity training in its on-going effort to keep the thinking of its executives and upper level staff vital. The authors aim to evaluate the YMCA's rather extensive experience with sensitivity training; they do this essentially in two ways:

1. They executed a case-study of the YMCA use of the method by surveying YMCA executives who found sensitivity training and the "laboratory method" useful and also interviewing those who objected to use of the method.
2. They also give a more general evaluation analysis of the method; this is based on the relevant literature dealing with applications of the method in other cases.

Based on their findings from the case study and from other

research knowledge available from the behavioral sciences, they suggest guidelines and a training program utilizing the laboratory method. This advice covers the design and the running of a sensitivity training laboratory.

- Boyd, J. B., and J. D. Elliss, FINDINGS OF RESEARCH INTO SENIOR MANAGEMENT SEMINARS, Toronto: Personnel Research Department, The Hydro-Electric Power Commission of Ontario, 1962, p. 7.
- Bunker, Douglas R., "Individual Applications of Laboratory Training," JOURNAL OF APPLIED BEHAVIORAL SCIENCE, 1(2):131-148, 1965.
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Discusses a "ripening process" by which organizations become ready for making use of the learning and change potential offered by the laboratory method.
- Hampden-Turner, C. M., "An Existential Learning Theory and the Integration of T-Group Research," JOURNAL OF APPLIED BEHAVIORAL SCIENCE, 2(4):367-386, 1966.
- Knowles, Eric L., "Research Since 1960," EXPLORATIONS: HUMAN RELATIONS TRAINING AND RESEARCH, Washington, D.C.:NTL Institute for Applied Behavioral Science, 1967, pp. 13-34.
- Miles, Mathew B., "Changes During and Following Laboratory Training: A Clinical-Experimental Study," JOURNAL OF APPLIED BEHAVIORAL SCIENCE, 1(3):215-216, 1965.

- Schein, Edgar H., and Warren G. Bennis, PERSONAL ORGANIZATIONAL CHANGES THROUGH GROUP METHODS: THE LABORATORY APPROACH, New York: John Wiley and Sons, 1965.
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- Stock, Dorothy, "A Survey of Research on T-Groups," in Bradford, Gibb, and Benne, eds., T-GROUP THEORY AND LABORATORY METHOD, New York: John Wiley and Sons, 1964, pp. 395-411.
- Valiquet, M. I., CONTRIBUTION TO THE EVALUATION OF A MANAGEMENT TRAINING PROGRAM, unpublished Ph.D. Thesis, Cambridge, Mass.: M.I.T., 1964.

Technique #26

Role Playing

Basic Principle:

People may gain perspective if they learn to appreciate that other interests see a given situation quite differently because they operate under a different set of needs and constraints. In some situations - for instance, in the case where different, but very compelling, forces act on individuals - role playing may be the most effective technique for giving people a feel for the pressures that may be operating on other actors.

Key Features:

1. The various roles that are to be studied via role playing are described, and the kind of interaction that normally takes place between these roles is described.
2. Rules designed to capture the essence of the real-world relationship which is being simulated by role playing are written up for the general conduct of the game and for the various roles.
3. Selecting the participants - Participants can be self-selected or selected by persons conducting the game.
4. Preparing the audience - If an audience exists, it should be prepared to listen and to observe the players to see how they play their roles. The members of the audience are not intended to judge the players, but they can ask themselves whether they would play the roles the same way.
5. Setting the stage - This often is done with a lead-in story or background description of the roles.

6. Role-playing enactment - The individual interprets and plays the role as he wishes.
7. Discussing and evaluating - This is the most important part of the process; it is where most learning occurs.
8. Further enactment and discussion - Replaying revised roles, exploring alternative outcomes, playing out the next steps, etc., can give the group an opportunity to try several different solutions to the dilemma.
9. Sharing experiences, generalizing, and relating experiences to the original problem.

Variations:

- Role-playing games are complex; they must be carefully prepared. The highway agency might try to devise their own, but more likely it will use games developed by simulation experts.
- Some games are so complex that experts must administer them. These will be highly detailed and may take several days or weeks to play. Other games can be played in a few hours and administered by the highway agency. For short games, administrators may need little training. The beauty of a well designed game lies therein, however, that it is able to teach what the nature of pressures and constraints are that act on people in various positions, i.e., playing various roles.
- The highway agency can use these games to handle internal communication problems, to train new people, to try to find solutions to problems caused by outside conditions, to explore the agency values, to diagnose tensions and strains in the organization, or to prepare people for public meetings or conferences.

Example:

In the last few years, role playing has been used in several highway agencies. A one-day game was played by the principal highway administrators in one eastern state. Some of the roles in the game were: mayor, state highway administrator, city councilors, politically active women, displaced residents, a university president, the secretary of an ecology group, the head of the Chamber of Commerce, a former councilman who owned some downtown properties, etc.

After playing the game and discussing the roles, the highway administrators felt that they had gained a number of insights. They could better understand some of the reasons for opposition. In fact, they asked the consultants responsible for route location and design to use the game. They also started to study design standards, administrative procedures, and legislative channels to see how they could be changed in order to accommodate their insights.

Disadvantages:

- Complex games can be expensive.
- There is a danger that role playing can turn into parody.

Highway Applications:

The highway agency can use this technique internally at any time. The location team might also use this technique jointly with local interests during the issue analysis and design phases.

Selected References:

- Monroe, M. W., GAMES AS TEACHING TOOLS, S.M. Thesis, Cornell University, Ithaca, New York, 1968.
- Shaftel, F. R., and G. Shaftel, ROLE PLAYING FOR SOCIAL VALUES, Englewood Cliffs, New Jersey: Prentice Hall, 1967.

Both are discussions aimed at teachers of grade school children, but the principles behind role playing are clearly stated.

Technique #27

Mediating Between Different Interests

Basic Principle:

The location team's ability to achieve general public agreement on a course of action may, at times, depend on how well two interests can iron out some conflict between them. When this is the case, the location team may want to contribute to resolving the conflict between the two interests in question.

Key Features:

1. Clearly lay out the problem. Look for real and imagined conflicts and for personal and historic reasons for those conflicts.
2. Check the understanding of the problem with the parties to the dispute. Make sure the team sees the problem as these parties do. By laying the problem out clearly, each party may see a solution.
3. Look for solutions. First look for something both sides agree on. Building from that, look for suggestions that might be acceptable to each side.
4. Suggest feasible solutions to the disputing parties. (Solutions cannot be legally impossible or extremely expensive nor can they have severe undesirable consequences for a third party.)
5. Monitor the acceptability and the results of the effort.

Variations:

The location team will find that the intensity of its involvement differs for different disputes. If the team becomes very involved, it might use Technique #28 and become a third party to the dispute.

Advantages:

- The location team's role of trying to resolve conflicts between local interests is a constructive function for the location team to play; in this role it makes an unquestionably positive contribution.
- The location team learns a lot about the interests that are involved.

Disadvantages:

- The disputing parties may feel that the location team is meddling in their affairs and resent it.

Highway Applications:

This technique will most often be used during the design and negotiation phase and, to a somewhat lesser degree, during the ratification phase.

Selected References:

Douglas, A., INDUSTRIAL PEACE MAKING, New York: Columbia University Press, 1962.

The first part of the book presents the general principles and techniques of mediation.

Technique #28

Looking for, or Becoming, a Third Party in Negotiations Between Two Interests

Basic Principle:

This technique is a special case of CIT 27. If the resolution of a conflict between two interests requires a third party, then the location team may want to take on that role or look for someone else who will. Say, for example, that interest A is negatively impacted to some moderate degree and that interest B is positively impacted to a greater degree by the same alternative. Say that A prevents agreement from being reached on the choice of the alternative in question and that B prevents agreement from being reached on any other alternative. If A and B cannot get together, a third party, C, may be able to collect some of the positive impacts on B and pass them on in one form or another to A.

Key Features:

The location team searches for an actor who is in a position to effect an actual trade-off between interests which are impacted inequitably. Part of the task of identifying who can effect these trade-offs is how that actor can do it. For this, the location team may have to design the actual mechanism for making the trade-off.

Variations:

The degree of the location team's direct involvement is the chief variable.

The restrictions inhibiting conflict resolution may be personal or may be due to the perceptions of the people involved. In this case Technique #27, where agency acts as a mediator, can be useful.

Example:

In a southern county, two towns were affected by a new interstate route. The alignment desired by one town promised to improve access to its growing industrial park, but the same alignment also threatened to reduce the tax base of another town by a substantial amount. This second town wanted the highway but preferred an alignment that would remove only a very small part of its tax base. The first town was not adverse to compensating the second town if it got its way, but there appeared to be no vehicle for making the compensation, so the state highway department asked the county for help. The county government arranged, by negotiating with the two towns, to reduce the water and sewage payments of the second town by about as much as it would lose as a result of the loss of tax base and to increase the water, sewage and electric charges in the first town by the equivalent amount. This indirect compensation made it possible to redistribute the inequity of the highway's impacts.

Advantages:

- By acting as a responsible, concerned party in the resolution of community disputes, the team demonstrates its concern for equitable solutions to community problems.
- The location team can learn much about the various needs of the affected interests.

Disadvantages:

- This activity requires location team involvement in a range of issues which is broader than most highway agencies have had expertise in.

Highway Applications:

- Such mechanisms of indirect compensation are best built directly into the location/design solutions. They thus need to be explored and negotiated as part of the task of generating solutions.

Technique #29

Providing the Community With the Capability to Deal with Non-Highway Problems

Basic Principle:

A location team can find itself in a position where, if it chooses, it can contribute to the solution of some local problem which has no direct bearing on the highway and which is not impacted by the highway per se. The technique assumes that the location team's preoccupation with the location-design process does not preclude its contribution to help solving other, i.e., non-highway, problems.

Key Features:

The highway agency attempts to aid the community in finding solutions to all its problems. The agency can help not only through highway design but also by providing money, experts, and political pressure.

Variations:

- The agency can use the highway itself to accomplish other community objectives, such as the creation of a land-scaped belt through an area that lacks green, the separation of residential from industrial areas, the provision of more park land, etc.
- The agency can develop the location and the design of the highway in such a way that it contributes to the development of joint development for schools, commercial or industrial developments, mass transit, etc.

Example:

The concept of a linear city, incorporating community schools, a local college, industrial developments, mass transit, and residential

development - all designed over, under, beside, and around an urban expressway - was proposed in Brooklyn in the late 1960s.

Advantages:

This approach brings out the principle that the highway agency is a public agency and works for the public at large - not for some narrow interest.

Disadvantages:

- It usually requires more than the construction of a ribbon of concrete along the shortest route connecting two points.
- The highway agency's contribution has to be measured with more meaningful techniques than benefit-cost analysis applied strictly to highway user costs and benefits.

Highway Application:

The location team must familiarize itself with as many community problems as it can - not only with those that are obviously highway connected. It then must keep all these problems in mind as it develops location-design alternatives, and it must always be on the lookout for ways the fact of a highway being planned can contribute to the solution of any of these problems.

Technique #30

Carrying Out a Demonstration Project

Basic Principles:

This technique is actually a special case of CIT 22. Say the location team feels that its objective of achieving community agreement would be substantially advanced if it could really demonstrate some key concept which the public - and maybe even the location team - has never seen implemented before. The team may then choose to design a demonstration project for the express purpose of resolving any doubt or ambiguity about what the concept would be like if it were to be implemented.

Key Features:

The location team implements a proto-type of a design feature - or of a crucial point thereof - so that everyone can find out for himself what the real thing, i.e., the location-design alternative in question, would be like once it is implemented.

In order to give everyone the chance to find out what the alternative would be like, the demonstration project must be carefully designed to answer the questions which are in people's minds; the project must clarify those issues which were left in dispute by drawings, verbal descriptions, and statistical projections.

The location team specifies what the demonstration project is to consist of and what it is supposed to demonstrate. Since a demonstration project most likely is to demonstrate something not only to the location team but also to the many lay interests, it is crucial that these interests be involved in the design of the project.

Otherwise, there is a good chance that the demonstration project fails to clarify those issues that these lay interests were most concerned about.

Example:

A location team argues that a well-landscaped expressway which is otherwise, i.e., except for the intense landscaping, of rather conventional design, absorbs most of its own traffic noise, and creates a pleasant green strip to an urban area. To demonstrate what such a highway might look like, the highway agency designs and installs landscaping of the nature it has in mind for a two-mile segment of an existing expressway in the same city. It takes pictures and movies, and it makes noise-level measurements before and after the demonstration project is implemented.

Variations:

- Use an existing small project to show what a larger project will look like or to demonstrate a new design feature.
- If a new idea is suggested, the team could look to other highway agencies, to housing agencies, etc., to see if something similar has been done elsewhere. If so, both the location team and community groups can study the existing example to get some notion of its applicability, acceptability, etc.

Advantages:

- The team gains information about the acceptability and appropriateness of the proposed solution.
- Often the team can use the demonstration project to work the bugs out of an idea.

- The community residents may feel that a proposal has been worked up only for discussion. Executing a demonstration project can show the team's sincerity in implementing an unconventional solution. This is particularly good for showing programs that are designed to alleviate negative highway impacts.
- This minimizes the possibility of misconceptions about the form of the final solution.

Disadvantages:

- The technique tends to be expensive and time-consuming.
- Because demonstrations are necessarily small things, perhaps the real impact will not be seen. This is true when the project scale determines the nature and severity of impacts.
- Many large projects cannot be broken down into components suitable for demonstration.
- The team must be willing to commit money to a project even though it may be found unacceptable. The demonstration project cannot be so costly or time-consuming that the whole agency becomes committed to its implementation because the demonstration project was undertaken.

Highway Applications:

The demonstration is most useful if conducted during the end of the negotiation and beginning of the ratification phases.

Reference:

California Division of Highways, CENTURY FREEWAY RELOCATION HOUSING PROJECT PROGRESS REPORT #1, Right of Way Department, 1968.

Technique #31

Conducting an Experiment

Basic Principle:

An experiment has to be designed so as to be reproducible; it is used to find out the effects of varying one or a few variables.

The location team may have a fairly good idea what the results of an experiment they undertake may be, but if they are sure of what the outcome will be, it is not an experiment.

Key Features:

An experiment is designed and carried out so that an hypothesis can either be rejected or accepted with significantly more confidence than would be possible without the results of the experiment. Consequently, the location team has to spell out precisely what hypothesis is to be tested, and it has to determine how the hypothesis can be tested.

In the design of the experiment, the location team has to make sure that the outcome of the experiment clearly shows what the cause and effect relations between variables are. To do this, the team controls - as well as is feasible - all variables which could confuse the interpretation of the cause and effect relationship between two variables and then lets one of the latter vary to determine its effect on the other. Useful experiments can even be carried out if the location team has less control over all the variables than it would ideally like to have. In such a circumstance, the team has to be able to understand and isolate the effects of these variables, so that it can adjust the results of the experiment.

Whether an experiment is a very pure one, i.e., one where the team has complete control over all the independent variables, or whether it is one where it cannot control all the variables it would like to control and has to settle for trying to interpret and adjust the results, an experiment has to be reproducible. That is, the location team must be able to write down a recipe for the experiment, and it must be able to predict what the results will be if someone else duplicates the experiment by following the recipe.

Carrying out an experiment as a community interaction technique most likely means the experiment is carried out not only for the benefit of the location team but also for the benefit of some lay actors. This requires that all the actors, for whose benefit the experiment is carried out, understand the design of the experiment and that they agree, before the experiment is carried out, how the various possible results will be interpreted.

Example:

Some actors argue that the close proximity of an expressway to a large traffic generator provides for the best method of handling the traffic while others argue that the close proximity makes for the creation of frequent traffic jams because each of the few access ramps and local intersections is critical in such a system. An experiment can be designed which simulates, on a computer, the performances of the two kinds of systems under various conditions and with the introduction of life-like random events, such as the breakdowns of a car, the occurrence of an accident, the necessity of street repairs, etc.

Advantages:

The design of an experiment forces everyone involved to specify the workings of his conceptual model and the identification of what the important variables are. The execution of an experiment is an occasion for learning and increasing the team's ability to make good impact predictions.

Disadvantages:

Impact prediction involving people does not lend itself to experimentation. First, sociological or psychological nature impacts touch people's lives too closely to permit experimentation - even though the knowledge that might be gained through experimentation is sorely needed. Second, an actor's social and psychic condition is affected by a great number of variables; they are not easily controlled as is necessary in an experiment.

Highway Application:

Experiments can be put to good use in impact prediction.

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Technique #32

Charette

Basic Principle:

In the architectural profession, it has been traditional ever since the Ecole des Beaux Arts sent a charrette (cart) around Paris to collect its students' work when the submission deadline was reached to call crash efforts at designing as being "en charrette," (The hard-pressed students, rather than surrender their designs, used to jump on the cart along with their drawings so that they might work on them a few minutes longer "on the cart," i.e., "en charrette.") The concept of a charrette has been expanded to include using large segments of a community working in a short but highly intensive effort on the solution of a particular community problem.

Charrette is the intensive brainstorming process of producing plans within a strict deadline. A charrette includes all parts of the community and key public and private officials who meet in open public forums to plan directly for the community. A large public project like a highway is used as a catalyst to achieve comprehensive community planning.

Key Features:

A charrette is started when a steering committee is formed. This committee is open to all those who want to join; the members are not picked by anyone. The steering committee meets weekly for two or three months to define issues and gather data relevant to those issues. Since the committee is always open to new members, new issues can always be added. After two or three months of preparation

and publicity, one or two weeks of full-time planning sessions are held, inviting the participation of everyone from the community. These planning sessions often are conducted at night or on weekends. Working against a deadline forces people to crystalize their ideas into proposals and helps to create the kind of intense issue analysis that is needed to formulate alternative solutions. Though professional planners and designers are present, they act chiefly as technicians, illustrating the consequences of following one line of reasoning or another.

Variations:

Every charrette is different; but the technique, applied by a large number of lay interests, is too new to document a taxonomy of charrettes.

Example:

The U.S. Department of Housing, Education and Welfare has run charrettes for public school designs in which community residents and local officials worked together to develop a range of alternative types of school concepts and to stimulate discussion of their respective consequences.

Advantages:

- The local community often becomes more cohesive.
- This technique requires the development of a working partnership of federal, state and local agencies in a community along with the citizens, of professional and lay actors. This cooperation usually continues long after the charrette.
- Since the plans are made by community residents, they usually have a commitment to them.

Disadvantages:

- Some community residents, especially those with two jobs or with small children, may not have time to take part in the charrette.
- In the highway context, disagreements may be so great that some actors cannot see themselves playing any role other than be out-right opponents of any highway concept.

Highway Applications:

This technique lends itself to the task of generating alternatives.

References:

For more information, write to:

Thomas Dwyer, U.S. Department of Health, Education, and Welfare,
Division of Facility Planning, Room 1271, HEW North 330
Independence Avenue, S.W., Washington, D.C. 20201.

Technique #33

Employing Community Residents on the Project

Basic Principles:

This technique means "employing people who are residents whom one would not hire if they were not residents". There are three possible reasons why a location team would want to do this:

- 1) Planning and construction of a highway constitutes a large public investment, a good deal of which is in wages; the location team may want to make sure that the local residents get some of the jobs.
- 2) The location team may wish that some skeptical local community interests would have some of their own trusted people working in the highway agency so that these interests would find out that the location-design process really is legitimate.
- 3) The location team may feel that if they had some people from the local community on its staff, the other location team members could learn a lot more about local interests and issues.

Key Features:

The agency stimulates the economy of the community by providing jobs for local residents. These residents fall into three groups:

- 1) general office personnel - professionals, secretaries, etc.,
- 2) technical teams - contracted groups or firms,
- 3) local residents hired to act as liaisons to the community.

Basic Purposes:

The purpose of this technique is twofold. By hiring local residents, some of the money spent in the highway planning process

is kept in the community. In addition, employees who are residents may better understand community values and desires and may help the location team avoid actions that might be offensive.

Major Variations:

- The team may reap benefits directly by hiring residents to act as community advocates within the location team, or the benefits may be indirect, i.e. through the informal contributions of qualified residents hired for normal team positions. In either case, the role of the resident should be explicitly agreed to by both parties.
- In addition to hiring individuals, the agency can hire local groups or firms to provide relocation housing, surveys, publicity, engineering services, construction materials, etc.
- It is best to put the terms of employment in writing, with one copy going to the resident being hired and another placed in the agency files. This is especially important when residents are being employed by the highway agency for the period of the project (or a portion thereof) only. In this way, there will be no misunderstanding and hard feelings when the resident is dropped from agency payrolls at the end of the study.

Example:

The North East Power Company was criticized by a number of conservation groups when it tried to build power plants in New England. It granted \$100,000 to New England Natural Resources Control which set up a watchdog agency of local conservationists. They have monitored the power company's activities to assure that they meet the

conservation standards.

Advantages:

- The location team gains insights and background information that may be unwritten. As a result, it should avoid some potential mistakes.
- The community people may provide fresh insights and new perspectives within the professional agency.
- The team may become more sensitive to the community needs or desires.

Disadvantages:

- The technique smacks of "buying out" the opposition.
- If the objective of using the technique is to improve liaison with the community, the agency must use great care to avoid the appearance (as well as the reality) of "cooptation" which would result in the loss of the agency's as well as the neighborhood worker's credibility in the eyes of the community.
- The team might make the mistake of assuming that the hired local people or organizations speak for the community. It is safe to assume that no-one who can be hired can do so.

Highway Applications:

This technique is sensitive to the point of being dangerous. As far as it is useful, it lends itself to application throughout the location-design process.

References:

"Housatonic Hassle", NEWSLETTER OF THE MASSACHUSETTS AUDUBON SOCIETY,

Vol. 10, No. 7, March 1971.

A description of the project mentioned in the example is given there.

Technique #34

Previewing as a Check on Communication Effectiveness

Key Feature:

The person or group wishing to communicate has someone review his manuscript, speech, or visual aid presentation to the intended audience. Having someone else review the information usually will point out the logical errors in the work and will help make sure that the communication will be understood. The reviewer should be less able to understand the material than the eventual audience; thus, if the reviewer can understand it, the communicator can be confident that his audience will. The reviewer should be asked to repeat the message to the communicator so that any misinterpretation will be evident.

Basic Principle:

The basis of this technique is the realization that it be easy to say something but that it is very difficult to get one's point across. A story has it that Napoleon kept a not-too-swift non-com around on whom he used to check the effectiveness of his own communication in the following manner: whenever he was about to send an order to his generals he would first have his non-com read the order and then tell, in his own words, how he interpreted the order. Only if it came out without distortion did Napoleon send the order; otherwise he rewrote it and tested it again.

Variations:

1. The reviewer might have the same background as the intended audience. This will help to catch any unfamiliar terminology. An engineer should not have another engineer review his speech

to a group of homeowners.

2. The reviewer might be selected because he has quite a different background and therefore a different perspective from the writer and/or the audience.

Disadvantages:

- The technique is so simple that people hesitate to use it.
- Over time a reviewer may become familiar with the writer's (or speaker's) style. He then is able to understand things others cannot and he thus can no longer serve this function.

Highway applications:

The technique is useful any time the agency detects a communications problem, especially before major public announcements. It can be used by the whole agency and by the location team.

Technique #35

Brain-Storming

Basic Principle:

Encouraging people to bring forth their ideas, no matter how tentative or "way out" they may be, is the chief purpose of this technique. There are essentially just two ways of making this happen: 1) Ideas are not subjected to any kind of criticism in order not to inhibit people from bringing out thoughts that they might think could be labelled as silly, and 2) the participants in a brain-storming session try to stimulate each other's thinking by picking up on each other's ideas and carrying them further.

Key Features:

Participants in this technique make suggestions of possible alternatives or partial features of alternatives with a minimum of caution about the feasibility or wisdom of the various concepts. The proposer's colleagues add to the idea, propose variations on it, etc.

Variations:

The technique can be carried out at different levels. For example, the participants may sit around a pot of coffee and make their proposals as impromptu as they pop in their heads. Or, the participants may write short, imaginative papers - e.g. scenarios - and circulate these among themselves for comment, expansion, take-offs, etc.

Example:

A highway agency may call a number of professionals together for a three-day brain-storming session at a country retreat. The participants are given a problem and are made to understand that they should contribute all their ideas, as fast as they come to mind, uncritically, - and without criticising each other's ideas. Only later, after all ideas appear to be on the table, should they begin to analyze them and begin to delve into the pros and cons of each one.

Advantages:

- The technique helps generate a great number of concepts in very short time.
- Because the proposals are not limited to "feasible" proposals, ideas which may, on the surface, appear to be infeasible also get considered. Some of these, it could turn out during analysis, may well be feasible after all. This is one of the few methods for penetrating beyond the perceived constraints of professionals.

Disadvantages:

The technique does not come natural to us; we are so used to making sure not to make "foolish" proposals that we - particularly established professionals - have to learn to release our imagination from the inhibitions we normally impose on them.

Highway Application:

This is a technique which should prove useful during the generation of alternatives and in the creation of augmentations to existing alternatives.

Technique #36

Looking for Analogies

Basic Principle:

One way of latching onto new possible ways of dealing with a highway problem is to search for analogous problems in entirely different contexts. The criteria for determining whether an analogy is fitting or not is the usefulness of looking at the problem in this new way, the light that the analogy is able to shed on the problem. For a person to make use of the technique, he has to:

1) have a good understanding of the problem at hand but not be so deeply immersed in it that he no longer is able to look at it in a new way, and 2) he must have intimate knowledge of some other field which can serve him as a source for analogies.

Key Feature:

The location team searches for instances where a situation which consists of problems which are different but analogous from the problem that is facing them. The team makes a conscious effort to translate its immediate problem into a different context so that it can make use of solutions that may have developed in that other context.

As a first step, the team needs to create a relatively abstract model of its problem and then it can look for situations in other contexts where the same type of problem has occurred and has been dealt with successfully.

Variations:

The location team can survey other contexts to look for useful

analogies. Or, it may hire a professional from an entirely different field, ask him to survey the location team's problems and tell the team about situations which, he believes, are to some degree analogous in his field.

Example:

The way an expressway has to mesh with the local traffic network, the community's parks and open spaces; the way it helps or hinders the normal social interaction of each neighborhood and the larger community - is analogous to the way a strand or a fiber fits into a fabric. It makes contact with many other strands and is woven into them in a way that these fibers support and strengthen each other; it is not a matter of competition for space and priorities but a matter of weaving an urban fabric of mutually supportive systems.

Advantages:

Analogies, if well chosen, offer strong, compelling conceptual models for perceiving problems. New conceptual models are difficult to perceive, and analogies provide crutches for our imaginations which help us understand new concepts.

Disadvantages:

- Analogies, with few exceptions, are only useful models to a certain degree of detail; if carried very far an analogy fails to fit the context.
- Each individual is limited in the range of fields from which he can draw analogies by the breadth of his background. Since the

same applies - to some degree - to the general public which is supposed to understand the analogy, provided that is the case, an analogy from some esoteric field may require as much explanation as the concept it is supposed to help clarify.

Highway Application:

Analogies which:

- 1) fit the highway concept which they are supposed to clarify for the public, and
 - 2) have compelling meaning for the relevant public,
- should be used to communicate the major concepts to the public; they are great potential resources for communicating subtle, and therefore difficult-to-communicate, concepts.

Technique #37

Cataloguing Design Concepts

Basic Principle:

Creating and organizing a catalogue of potentially useful concepts for the generation of alternative courses of action can be a very useful tool. With the help of such a catalogue, the location team can make sure that it does not overlook the already existing concepts. The catalogue is no substitute, however, for techniques aimed at generating solutions in direct response to a problem.

Key Feature:

The location team keeps a loose-leaf catalogue of concepts where it records every major design feature that comes to its attention. The description of each concept should be specific enough to make sure that the concept's chief characteristics are covered.

Besides the actual description, entries should be made to show where one can find additional information on the concepts. These entries need not necessarily make reference to publications; it is possible that nothing has been published on the concept. In that case an entry like "John Appleyard in the District 007 office knows more about this concept" might turn out to be very useful.

Variations:

The catalogue might, on one extreme, be nothing more than a thoroughly cross-referenced index of concepts and where substantive information on each one can be found. On the other extreme, the catalogue might include all of the substantive information that is

available, in an encyclopedic manner, as well as give good cross-references. Each location team ought to analyze the role its catalogue is to play in its operation, and it should decide where on the continuum between these two extremes its catalogue should fit.

Example:

A location team keeps a notebook with descriptions and photographs of each highway design concept from everywhere in the world that they are aware of and a description of the ingredients of each joint-development project that has been undertaken by any highway agency.

Advantages:

A catalogue gives the location team the opportunity to review very quickly whether some useful concept might be available which have already been worked out elsewhere.

Disadvantages:

Some professionals may rely too much on the catalogue; the already developed concepts might inhibit their imaginations and prevent them from generating their own solutions.

Highway Application:

All of the several areas of alternative-generation can benefit from this technique. Catalogues thus should be developed for:

- alignment types,
- geometric designs,
- joint development concepts,
- compensation methods,

- different, relevant legislation of various states
- etc.

Technique #38

Designing "Extreme" or "Ideal" Solutions from Various Points of View

Basic Principle:

This is a standard mechanism in the design professions. A designer generates an alternative which is "perfect" from one single point of view in order to learn something about the design problem rather than to actually use the design thus generated.

Key Feature:

The location team generates an alternative from each of a number of extreme points of view. The resulting designs tell the location team something about the way each of the various interests might be perceiving the best solution, and the exercise also forces the location team to analyze the various features of the total design which each interest is most concerned about.

Variations:

The technique can be carried out as described above, i.e. where each location-design alternative is developed strictly in response to the values of one interest. One variation of this is to start from some given design and look for features which each interest would like to see added to it to the base alternative to make the thus augmented alternative acceptable for him.

Example:

One controversial segment of an expressway was disliked by various interests for several different reasons. If the location team

had tried to develop variations on the theme of this controversial location-design, each in response to an interest, it would have discovered that

- 1) one interest was concerned about the high residential displacement,
 - 2) one interest opposed industrial dislocation,
 - 3) one interest was opposed to the competition the highway was potentially creating for a nearby toll road,
 - 4) one interest disliked the predicted generation of heavy local traffic near access ramps in the downtown area,
 - 5) one interest was concerned because the highway would disturb the residential pattern on which the local (declining) church organization depended,
 - 6) one interest felt that the highway would disturb the base for existing political organizations,
 - 7) one interest liked the alternative because it could serve as a barrier to the continued expansion of an industrial district into a residential area,
- 3) etc.

Advantages:

The technique sharpens the issues and their design consequences; this helps the professional understand the problems and increases the chances he can put together a solution.

Disadvantages:

Knowing what the ideal solution would look like from each inter-

est's point is still a long way from being able to incorporate all of these "ideal" features into one single alternative.

Highway Applications:

The location team should find the technique most useful early in the highway location-design process, i.e. during issue analysis.

Technique #39

Parallel Search

Basic Principle:

When one has worked on solving a given problem for some length of time, it may become very difficult to put the work aside and pursue the same problem from a different angle; one tends to get into a mental rut. One way to counteract this phenomenon is to have several designers, who do not in any way communicate with each other, work on the same problem in the hope that they will not all get into the same rut.

Key Feature:

The highway agency designates more than one location team with the responsibility of generating solutions to a given problem and makes sure that the two (or more) teams do not communicate with each other. Each of the teams is thus working parallel without knowing what the other team is doing - or even knowing that there is another team working on the same problem.

After each of the teams has developed its main concepts, they can be compared and only the best pursued from then on.

Variations:

The technique described above is one possibility; another way of doing parallel search is to send several individuals (or consultants) of the same team off to work on the same task for a relatively short period, e.g. three days, and then bring them back together and see what concepts have been developed.

Example:

One highway agency commissions three consultants to come up with a joint-development concept which is feasible to carry out and which is broad enough to deserve support from each of a community's various interests. The agency does not tell the consultants who these interests are; identification of these interests is part of the concept formulation. The agency makes it understood that the concept which gets the necessary community support is the only one which will be pursued. This makes their efforts competitive and prevents the three consultants from comparing notes and thereby get into the same rut - which would defeat the technique's purpose.

Advantages:

A professional, a location team - in fact - a highway agency tends to be limited in the different possible concepts it can perceive by its very early perceptions; i.e. everyone tends to get into a rut and stay in it. This technique recognizes this problem and raises the possibility that parallel searches get into different ruts and thus may generate more than just one way of looking at the problem.

Disadvantages:

The professionals involved may get more concerned with having their particular concept used than with the importance of getting the best concept used - even if it is not their own. It thus may prove quite difficult to select the concept on its own merits; professionals may try to exert a lot of pressure to influence the

choice.

Highway Application:

The technique has something to offer at every level of the location-design process where concepts have to be generated, be they conceptualizations of a problem or conceptualizations of potential solutions.

Consequently, the location team should always be on the lookout for ways of applying the technique to one degree or another.

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